UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. Bureau of Agricultural Economics

MANPOWER FOR WAR WORK

Eastern Kentucky

by

Olaf F. Larson and James C. Downing

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CONTENTS

SUMMARY

Wartime demands for workers to help the nation meet its agricultural and industrial goals have drawn attention to the reservoir of manpower that is made up of America's low-income and underemployed farmers. Some question exists regarding the number of farm families that might properly be considered potentially available for more productive work than their farming operations permit. Within the past year, estimates have been made that there are perhaps 700,000 such families; but, as these estimates were based on 1940 data, it has been desirable at this time to ascertain if they have been outmoded by later heavy out-migration from low-income agricultural areas. This is a report of such an analysis, made by means of a survey of potential rural manpower in Eastern Kentucky -- one of the most important "reservoir" areas.

The survey found more rural workers in this area available for employment than the earlier estimates had indicated. A low estimate of 63,000 available workers in the 33 Eastern Kentucky counties as of December 1, 1942, includes 28,000 men who are heads of families, 19,000 other men, and 16,000 women who are neither wives nor heads of households. These are persons aged 15 to 59, not now having a war job and not productively engaged on their own farms, and not having any serious handicaps to prevent them from changing work. The high estimate of 98,000 available workers also includes housewives without children under 10 years of age and some others - especially youths of 15 and over who are normally in school part of the year - who were not a part of the low estimate. It is clear from the survey that a large part of this labor reserve will be most readily available in family groups.

Among the barriers to changing jobs and work locations, either within or outside of the area, is the fact that one in three of the married men would have to make arrangements for disposition of the land he owns and farms. Over half have families of five or more persons, thus facing special problems, if they move, of paying transportation costs and procuring housing. About 20,000 of the 28,000 married men have either land or large families or both to restrict their ease of movement. Lack of experience with more complicated farming equipment and with large-scale farming operations is general, as is a lack of formal education beyond the elementary school. Although the workers face rather drastic adjustments if they enter agriculture elsewhere or industry, the majority are young and many indicated a willingness to take a war job. Attitudes of these potential workers toward their present way of life and toward making a change, as well as public policies and programs, will influence how many do enter more productive employment.

Although there are many persons who might work seasonally on farms outside of Eastern Kentucky, the majority of workers available on a year-around basis appear to be more interested in industrial than in agricultural work. One reason for this attitude is the loss of status involved in becoming a farm laborer; another is the difference between agriculture and industry in wages and hours of work. Most of the men who might be available as year-around farm hands will have families.

The war contribution of Eastern Kentucky's farm population has been largely in terms of workers and fighters rather than food. Among the 359 families for which 1942 farm business records were obtained, four-fifths

had less than 8 war units, averaging 3.5. (The make-up of a war unit is discussed on p.15.) Twelve percent had between 8 and 11.9, averaging 9.5, while the remaining 8 percent had 12 or more war units and averaged slightly over 14. Production plans for 1943 were not significantly different from those in 1942.

Farm families with less than 8 war units had an average annual gross cash income of $109 from the farm, and a net cash farm income of $41. Each farmer belonging to this 80 percent sold annually, on the average, beef representing one-tenth of one animal, half of a veal calf, 10 chickens, 45 dozen eggs, and 8 pounds of butterfat. There was little difference between the farm production of families where the head was considered available for a war job and those where the head was not available because he already had a war job or was handicapped by age or disabilities.

Even if all the families whose heads were available for war work were to move, it is estimated that Kentucky's annual production of butterfat would diminish by less than half of 1 percent, of cattle and calves by not more than 8 percent, and of poultry by less than 6 percent.

Opportunities for widespread combination of farms are rather limited even in the event of the departure of families with available workers. The limitations arise partly out of the restricted acreages of creek bottom-land, the fact that unused tracts may be relatively inaccessible to other operated farms, and the high labor requirements for crops because of rugged topography and small irregular fields. The families whose heads are employed at war jobs or who are handicapped by age or disabilities will not generally be able to increase their farm operations through farm combination.

The number of workers estimated to be still available on farms in Eastern Kentucky at the close of 1942 exceeds the number who had left the farms since April 1, 1940. However, during the 2 years and 8 months following the 1940 U. S. Census, the rural farm population of the 33 counties is estimated to have decreased 19 percent. This loss more than offset the increases of the decade 1930 to 1940. Rates of loss were uneven within the region. Losses for men were larger than for women. Among both men and women, losses have been greater among persons under 35 than among older-age groups. The number of men 15 to 34 years of age decreased by 40 percent. Out-movement up to the time of the survey was largely one of individuals leaving singly and of young families. Practically all of the loss, except to the armed forces, had been through migration to nonagricultural industries and for the most part was without the guidance of a public agency.

As a result of the movement out, the composition of the population has been altered by decreasing the proportion of workers, increasing the proportion of young and aged dependents, and decreasing the ratio of men to women. If the present age and sex distribution continues long, it is likely to be reflected in higher rates of social dependency, higher illness and death rates, and lower birth rates. Schools have already been affected by the reduction in number of children. Even though the acreage of land per capita is increased by the out-migration, the income per capita from farming is likely to decline because of the loss of productive workers. Further losses of workers and their families may be expected to accentuate these tendencies.

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INTRODUCTION

The Nation at war requires efficient utilization of its manpower if increased agricultural and industrial production goals are to be achieved. Wartime needs for workers have drawn attention to the low-income farmers of the Nation as a great potential reservoir of underemployed manpower which might be recruited to help meet these production goals. Data from the 1940 Census of the United States have been the major basis hitherto for estimating the volume and areas of concentration of this manpower supply. Such estimates, however, have been subject to the consideration that they might be no longer valid, because the population shifts since 1940 might have removed most of the available workers from the low-income rural-farm population.

To provide current information for agencies concerned with manpower problems, a field survey during November and December 1942 was made in Eastern Kentucky - one of the areas these estimates showed to have a large number of workers potentially available. This is an area long recognized as one where "a decrease in the pressure of population appears to essential to the solution of major economic problems"2/. During the depression years, as the movement from farms to cities stopped and population accumulated, recommendations were made that families on the rougher, poorer lands develop their limited land resources "until opportunities for resettlement on suitable agricultural land become available"3/. By early summer in 1942, public agencies had started to recruit farm people from Eastern Kentucky for work on farms in other areas.

The field survey shows that a substantial labor supply for work in other areas was still available on the farms of Eastern Kentucky at the close of 1942, despite heavy outmigration since the 1940 United States Census was taken.

* BUREAU OF AGRICULTURAL ECONOMICS, U. S. DEPARTMENT OF AGRICULTURE.

1/ BASED UPON DATA FROM A COOPERATIVE STUDY OF THE BUREAU OF AGRICULTURAL ECONOMICS, U.S. DEPARTMENT OF AGRICULTURE, AND THE KENTUCKY AGRICULTURAL EXPERIMENT STATION. HOWARD W. BEERS AND JOHN H. BONDURANT, KENTUCKY, COLLABORATED IN THE STUDY. PAUL J. JEHLIK AND JOSIAH C. FOLSOM, BUREAU OF AGRICULTURAL ECONOMICS; HARRY YOUNG,JR., KENTUCKY AGRICULTURAL EXPERIMENT STATION; E. F. DANIEL, FARM SECURITY ADMINISTRATION AND ROY E. PROCTOR, KENTUCKY AGRICULTURAL EXTENSION SERVICE ASSISTED IN THE FIELD WORK.

2/ C. F. CLAYTON AND W. D. NICHOLLS, LAND UTILIZATION IN LAUREL COUNTY, KY., TECHNICAL BULLETIN NO. 289, U. S. DEPARTMENT OF AGRICULTURE IN COOPERATION WITH KENTUCKY AGRICULTURAL EXPERIMENT STATION, 1932.

3/ W. D. NICHOLLS, JOHN H. BONDURANT, AND Z. L. GALLOWAY, FAMILY INCOMES AND LAND UTILIZATION IN KNOX COUNTY, KY. AGR. EXP. STA. BUL. 375, 1937.

Purpose and Method of Study.

The present study is an attempt to provide an accurate estimate, in terms of relative producing capacities of persons on farms, of the quantity of manpower potentially available for more productive employment. Qualitative factors, such as social adaptation and work habits, are not directly considered, but do enter into the making of estimates (p. 45 ff.).

Specifically, the study was undertaken, (1) to ascertain the changes in the rural-farm population since April 1, 1940; (2) to learn the extent to which workers on farms in this area are productively employed as indicated by size of business, income, and volume of products sold, (3) to ascertain the 1942 and probable 1943 agricultural production on farms in Eastern Kentucky (4) to appraise the possibility for combining vacated with occupied farms, (5) to estimate the manpower on farms in Eastern Kentucky which might contribute more to the war by work elsewhere, and (6) to analyze the characteristics of this manpower.

During November and December, 1942, an inventory of manpower was obtained by making a complete population census of each of 5 selected magisterial districts. Carter, Clinton, Leslie, Martin, and Owsley Counties each was represented by one of these 5 districts. These counties in turn were selected to represent 5 sub-areas comprising, in all, 33 counties in Eastern Kentucky (fig. 1).4/ The population data were obtained through interviews with local informants who were usually postmasters, storekeepers, local officials, or other well-acquainted persons, and who reported on all families in their neighborhoods.

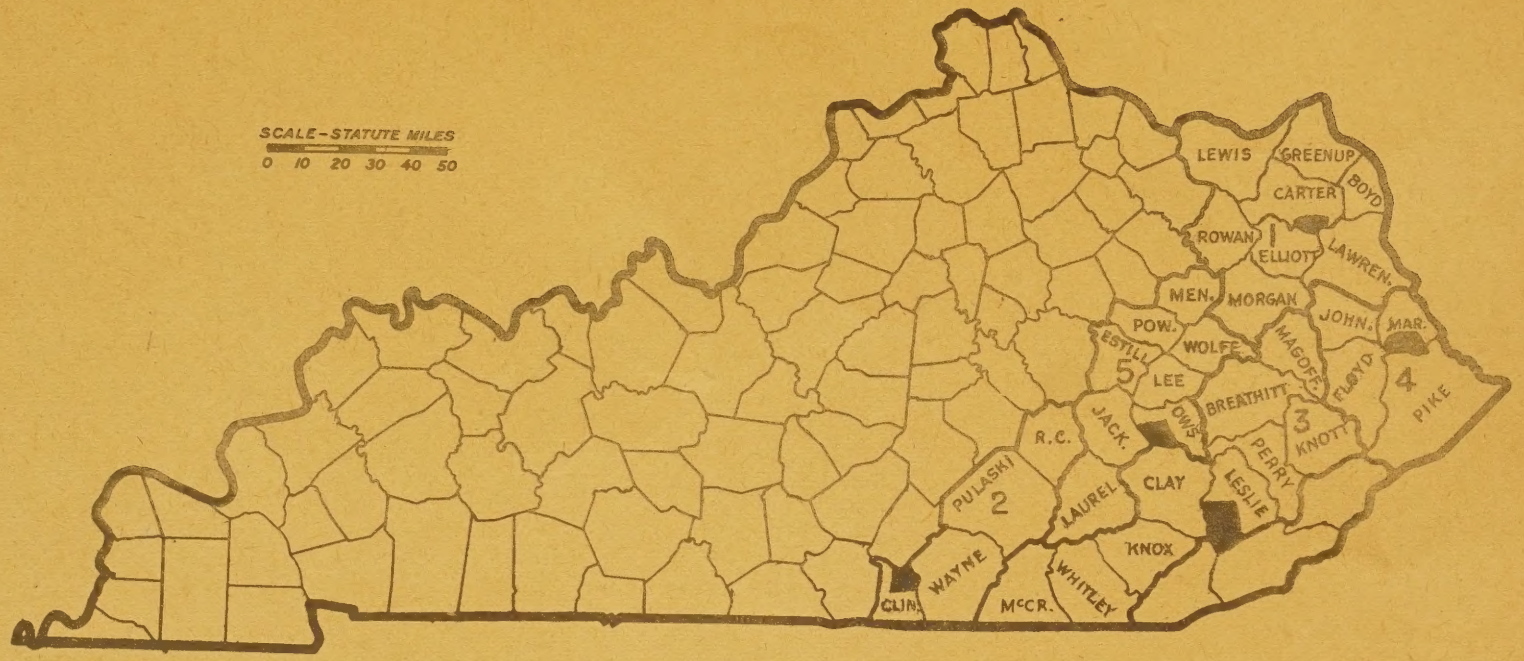
Farm business records and data on population and employment were obtained by interview for 359 representative families in the same 5 magisterial districts. The population data obtained in connection with these records, when matched with data for the same families as reported by the local informants furnished a basis for adjusting the population counts in each magisterial district. In addition, a reconnaissance survey through interviews with informed officials and farm leaders was made in 20 other of the 33 counties to supplement the information obtained in detail for the 5 magisterial districts.

"Availability" and "nonavailability" are terms used throughout this study to describe manpower potentially available or not for war employment of some kind. The criteria of availability are given as part of the detailed discussion of manpower, first, as found in the 359 families interviewed and second, as reported by local informants for the complete population census for the 5 magisterial districts (p. 16, 47, and 48).

In addition to this distinction between available and nonavailable manpower, the war unit labor values for agriculture, approximately as stated in Selective Service System Local Board Release No. 175, dated January 16, 1943, were used to compute the relative agricultural productivity of each farm. The war unit

4/ ONLY BELL, HARLAN, AND LETCHER, IN WHICH MINING IS A MAJOR INDUSTRY, HAVE BEEN OMITTED.

SUBAREAS USED FOR CALCULATING POPULATION CHANGES AND LOCATION OF MAGISTERIAL DISTRICTS STUDIED, EASTERN KENTUCKY, 1942



SUBAREAS: 1 = Carter 2 = Clinton 3 = Leslie 4 = Martin 5 = Owsley

■ MAGISTERIAL DISTRICT

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FIGURE 1

classification is described in detail on page 15.

A tenure classification was established to determine the relative availability of different classes of family heads (p. 16). Under this classification, the 359 families were grouped according to whether the heads were operators, croppers, or country residents. Owners, cash and share tenants were all included among operators.

Selection of Counties and Districts.

The five counties were chosen with reference to three factors: first, their accessibility to areas of industrial employment; second, the nature of farming opportunities in the region; and third, changes in the rural-farm population in recent census periods. The magisterial districts in turn were chosen as those most representative with respect to the rural-farm population in their respective counties.

The five sub-groupings within the total of 33 counties were decided upon principally because of recent changes in the rural-farm population as indicated by the reconnaissance survey.

Agriculture in Eastern Kentucky.

The area as a whole is poorly adapted to agriculture. The narrow valleys, steep slopes, and sharp ridges provide very little productive farm land.[2/] The hillside soils are of low productivity for most of the field crops grown. The alluvial, or bottom soils, if well drained, are on the whole considerably more productive than the hillsides, but are deficient in limestone and phosphate. Bottom land fields are small and hill fields are rough, with the result that labor is inefficiently used.

The lack of enough land suitable for farming, especially in relation to the number of people living on the land, has brought much poverty. People in this area formerly derived a large proportion of their incomes from lumbering and mining. This was true particularly before 1929. During the early thirties, however, opportunities for income from nonfarming sources were greatly restricted. Since 1940 the nonfarming sources of income have equaled and exceeded the opportunities of 1929, in many parts of the area. But the population increased rapidly during the thirties -- the rural-farm population in the 33 counties of this region increased approximately 17 percent from 1930 to 1940. This occurred chiefly because of the high rate of natural increase, the return to the area of many families who had previously left, and the retardation of outward movement. One result of these developments was a reduction in the land resources per capita of rural-farm population. In each grouping of counties the acres of harvested cropland per farm person declined enough to indicate increasing pressure of population upon resources.

Farming in eastern Kentucky is mostly for the production of food for home consumption. In 1939, according to the 1940 Census, the total value of farm products sold, traded or used at home was less than $250 for half, and

5/ CF. W. D. NICHOLLS, JOHN H. BONDURANT, AND Z. L. GALLOWAY, FAMILY INCOME AND LAND UTILIZATION IN KNOX COUNTY, KY. AGR. EXP. STA. BUL. 375, P. 157 FF.

Table 1. -Averages per census farm and proportion of farms reporting specified items; five selected magisterial districts in five counties, Eastern Kentucky; U. S. Census, 1940

Item	County and district				
	Carter: #6	Clinton: #3	Leslie: #3	Martin: #6	Owsley #2
Cropland harvested, acres	12.8	20.3	7.4	5.2	10.9
Corn, acres	8.0	10.2	6.0	2.6	6.4
Corn, bushels	163.0	165.0	87.0	42.0	130.0
Percent reporting tobacco	33.7	55.0	0.3	1.6	44.0
Acres of tobacco per farm reporting	0.4	0.5	0.0	0.0	0.5
Hogs, number (all ages)	2.1	3.5	4.8	0.8	1.3
Percent reporting hogs	59.0	62.0	80.0	55.0	57.0
Cows milked	1.6	1.6	1.0	1.0	1.2
Percent selling dairy products	12.0	13.0	0.0	3.0	4.0
Percent farms reporting work stock	68.0	61.0	56.0	44.0	58.0
Value of buildings	$380	$406	$142	$196	$325
Value of land and buildings per acre	$ 14	$ 18	$ 8	$ 18	$ 17

less than $600 for 9 out of 10, of the farms in the area. Many families had no appreciable income other than a limited amount from farming. Although off-farm employment has been a rather important source of income, only 28 percent of the farm operators worked as many as 100 days off-farm during 1939, and only 43 percent reported having any work off their farms.

Tobacco, veal and stocker calves, and poultry constituted the principal sources of cash farm income in 1939. Corn is the major crop and usually occupies from half to two-thirds of the total cropland harvested. Corn production averaged from 42 to 165 bushels per census farm in 1939 for the selected magisterial districts (table 1). It is used principally as stock feed and for corn bread. Irish potatoes are the most important garden crop, averaging one-fourth acre per farm; they are supplemented by beans, peas, and apples and other vegetables and fruits. Most of the farms had milk cows, averaging from 1 to 1.6 per farm in the selected districts. Some hogs are sold, mostly for fattening. More than half the farms have workstock, most of which are small mules. Farmers having no work animals commonly exchange one day of man labor for one day's use of a mule.

Social Organization in Eastern Kentucky.

The social organization of rural people in Eastern Kentucky is centered in the family and neighborhood. Sentiments of equality among neighbors, loyalty to kinfolk, and habits of self-reliance are integral parts of social life. The mountain farmer's home is usually a small log or boxed house, his church is a small, frame structure up the creek, his school is a one-room building overcrowded with children, and his road may be the creek bed.

But important changes have been occurring for nearly half a century. The early pattern of a self-sufficient familistic society was affected first by lumbering and then mining, which brought to mountain people their first real experience with money. Then, in the first World War, young soldiers and sailors from the hills saw life outside; workers at home received high wages in the mines. During the first post-war decade, people left their mountain homes for work in expanding industry. During the 1930's many returned, but - more important - outward movement decreased. The number of people in Eastern Kentucky increased much more rapidly than resources could permit without lowered levels of living.

The recently acquired dependence upon money income in some parts of the area, the shutting of mines, and the depletion of soil underlay new feelings of poverty. Various federal emergency programs introduced direct and work relief, rehabilitation, and many other activities. The time was one of change in a society that had long been stable. A confusion prevailed which involved on the one hand reliance upon tradition, upon self and family, the old support of the primary group, and on the other hand an acknowledgement that "times are different." But not until the days of national defense and World War II, was there again any strong pull from the outside. Military service and defense work, then war work, brought the mountain people their first large opportunity since the 1920's for more productive work outside than was possible at home.

During the current study, reconnaissance interviews with such people as county agricultural and home demonstration agents, Farm Security supervisors, school superintendents, Selective Service and Ration Board members contributed a general picture of population movement from the area. School census data and records of school transfers indicated that family groups were moving away. There were reports of heavy withdrawals due to enlistment, selective service, and a flow of workers into the war plants of Ohio Valley, Great Lakes, and Eastern cities. Most of the people around the mines in Eastern Kentucky were gainfully employed. Local employment in lumbering and railroading was reported to have increased in some places. In one sub-area, clay mines were being worked. However, in all age groups large numbers of both married and unmarried men from both town and country were finding work outside the area. The enumeration of population in five magisterial districts contributed more specific knowledge of these trends and conditions.

This study does not undertake to evaluate all the social aspects of migration from Eastern Kentucky rural areas, except as they affect the low and high estimates of potential war workers. Such factors as willingness to migrate, adaptation to new communities, effects of migration on public-health problems, education, and the future of depopulated areas must be considered, however, in a complete appraisal of public emigration policy.

CHANGES IN RURAL-FARM POPULATION, 1940 - 1942

This study is concerned with manpower in the rural-farm population. There is relatively little urban population in Eastern Kentucky, and most of it is industrially employed (table 35). The relatively large rural-nonfarm population in the area lives predominantly in or near mining camps, where it is more or less fully employed. Whatever manpower reserve might be found in Eastern Kentucky, therefore, should be sought on farms and in the open country. The magisterial districts studied were selected in part because they had no urban population and most of their rural people were on farms (table 2). With the exception of one Carter district village of 165 people in 1940, and scattered hamlets in the Leslie district, the few rural nonfarm people in these districts were open country dwellers. The study gives no basis, therefore, for estimating city or village manpower reserves. It does provide a satisfactory basis for estimating changes in the rural-farm population.

In the 2 years and 8 months intervening between the period of the Census of 1940 and the field work of this study, the population of all five magisterial districts declined, although each is an area of usually rapid population growth (table 3).6/ In the Carter and Owsley districts, population had decreased by 30 percent, and in the Clinton district by 19 percent. In the Leslie and Martin districts, both among the most isolated parts of Eastern Kentucky, the decline was less, but in each case it was more than 10 percent.

The nature of this rapid decline in population is revealed more completely when it is observed with respect to age and sex (tables 36 and 37). The decrease in number of men has exceeded that for women in each district, and was over twice as great in both the Leslie and Martin districts. The relative losses of women were largest in the Carter and Owsley districts (table 37).

In each district children under 15 were fewer, having been taken from the county by their parents, whose departure was indicated by decreases in the older age groups (table 3). The greatest declines were among males in the working age groups (table 36). In the Owsley and Carter districts there were decreases of 58 and 41 percent, respectively, in the number of men aged 15 to 24. In Martin County district, men of these ages were one-fourth fewer in number, and there were declines of one-third in both the Clinton and Leslie districts. Except in Carter and Leslie County districts, losses were even larger among males aged 25 to 34 than among those 15 to 24 years old. The number of women 15 to 24 years of age declined in each district but Martin, the number 25 to 34 declined in all but Leslie, and the number 35 to 44 declined in all districts but Carter (table 37). In the Clinton, Leslie, and Owsley districts declines were largest among women 15 to 24, and in the Martin district among women 25 to 34. In Carter, the two groups had equally large losses.

Decreases were smallest in the older age groups. The only county to experience any decline in males 65 and over was Clinton, but for the Clinton, Leslie, and Owsley districts fewer aged women were reported in 1942 than in 1940.

6/ Cf. Howard W. Beers, Growth of Population in Kentucky, 1860-1940, Ky. Agr. Exp. Sta. Bul. 422, 1942.

Table 2.-Distribution of population by residence, selected magisterial districts in five counties, Eastern Kentucky, U. S. Census, 1940

County and district	Total		Rural farm		Rural nonfarm	
	Number	Percent	Number	Percent	Number	Percent
Carter #6	3030	100	2403	79.3	627	20.7
Clinton #3	1959	100	1793	91.5	166	8.5
Leslie #3	3723	100	3202	86.0	521	14.0
Martin #6	739	100	711	96.2	28	3.8
Owsley #2	2718	100	2666	98.1	52	1.9

Table 3. - Population and percent change by age; selected magisterial districts in five counties, Eastern Kentucky; April 1, 1940 and December 1, 1942 1/

Age	Population										Percent change				
	Carter #6		Clinton #3		Leslie #3		Martin #6		Owsley #2		Carter #6	Clinton #3	Leslie #3	Martin #6	Owsley #2
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942					
Total	3,030	2,112	1,959	1,595	3,723	3,283	739	653	2,718	1,917	-30.3	-18.6	-11.8	-11.6	-29.5
Under 15	1,228	817	748	689	1,768	1,596	359	319	1,018	697	-33.5	- 7.9	- 9.7	-11.1	-31.5
15 - 24	615	367	364	249	746	533	121	112	555	267	-40.3	-31.6	-28.6	- 7.4	-51.9
25 - 34	373	230	259	149	450	366	80	46	333	179	-38.3	-42.5	-18.7	-42.5	-46.2
35 - 44	265	230	196	168	304	283	87	66	272	237	-13.2	-14.3	- 6.9	-24.1	-12.9
45 - 54	225	175	165	154	186	229	41	54	196	197	-22.2	- 6.7	23.1	31.7 A/	0.5
55 - 64	165	134	129	101	137	144	24	20	159	169	-18.8	-21.7	5.1	-16.7	6.3
65 and over	159	159	98	85	132	132	27	36	185	171	0.0	-13.3	0.0	33.3	- 7.6

A/ IN ESTIMATING THE CHANGE IN THE MARTIN GROUP OF 4 COUNTIES, IT WAS ASSUMED THERE WAS NO CHANGE IN THE POPULATION AGED 45 - 54 SINCE THE NUMBER OF FEMALES IN 1940 APPEARED TO HAVE BEEN UNDERENUMERATED.

1/ THE POPULATION ON DECEMBER 1, 1942 AS REPORTED BY LOCAL INFORMANTS WAS ADJUSTED FOR UNDER OR OVERENUMERATION ON THE BASIS OF COMPARISONS MADE WITH THE DATA OBTAINED BY INTERVIEWS WITH 359 FAMILIES. THE ADJUSTMENT FACTORS FOR PERSONS UNDER 15 WERE 3.2, 33.8, 4.4, 3.3, AND 4.9 AND FOR PERSONS AGED 15 AND OVER WERE -3.2, -6.4, -2.7, -5.0, AND 4.8 FOR THE CARTER, CLINTON, LESLIE, MARTIN, AND OWSLEY COUNTY DISTRICTS, RESPECTIVELY.

From the data for these 5 magisterial districts, estimates have been prepared to indicate the change in rural-farm population in the 33 counties of Eastern Kentucky. In this large area, there were an estimated 365,000 rural-farm persons in December, 1942. This was 85,000 fewer than the number reported by the Census of 1940, and was estimated to be less by 18,000 than the number of farm people in these counties in 1930 (table 4). In other words, the departure of farm people from this area between April 1, 1940, and December 1, 1942, was greater than the gain during the 10 years before 1940 by 27 percent. This was true of the area as a whole but not of all the county groups within it. In the Leslie and Martin groups, only a little over half the gain of the thirties had been lost in 1940, '41 and '42. In the Carter group, however, the loss in 2 years and 8 months was nearly 9 times the gain of 10 preceding years, in the Clinton group the recent loss was nearly triple and in the Owsley group nearly double the earlier gain. This indicates that the emigration since 1940 has been much greater in some areas than in others.7/

The number of men aged 15 to 34 in these counties decreased by more than 40 percent, and even the number of women of these ages declined by 23 percent (table 5). For every 100 farm children under 15 in 1940, there were only 82 by the end of 1942, a fact which could be accounted for only by the out-movement of the family groups to which the children belonged. Decreases were smaller above the age of 45. The number of women 45 to 54 increased 9 percent, and the number of all persons 65 and over increased slightly (table 5).

These changes altered the balance of age groups, changing the proportions of population that were very young and very old, and changing the ratios of men to women (table 38). It is rare for the number of males per 100 females to go below 100 in the rural-farm population, except at or about the age of 25. In the 1930 rural-farm population of the United States, there were 115 males per 100 females.8/ In the 33 counties of Eastern Kentucky, the 1940 rural-farm sex ratio was 100 or above in every age group, but by December 1, 1942, it was only 89 between the ages of 15 and 24, 74 between the ages of 25 and 34, 91 from age 35 to 44, and only 96 from 55 to 64. These are large and unusual deficits of men that could occur only in a population at war or as a result of heavy loss by migration.

For the estimated rural-farm population of the 33 counties, these changes are further indicated by a pyramid graph (fig. 2). The proportions of children and of persons over 35 increased; the proportions 15 to 34 decreased sharply for males, and slightly for females. Pyramid graphs for the five selected magisterial districts reveal differences among sub-areas in Eastern Kentucky, but reflect the same general pattern of change in less than three years (fig. 3).9/

7/ Estimates by the Bureau of the Census, based upon registrations for War Ration Book One, indicated the total civilian population in Eastern Kentucky decreased by 59,000 or 8 percent between April 1, 1940 and May 1, 1942, and show a loss for each of the 33 counties — thus tending to substantiate the changes estimated for the rural-farm population. See Bureau of the Census, Estimates of Civilian Population by Counties, May 1, 1942; Release Series P-3, No. 33.

8/ Dwight Sanderson, Rural Sociology and Rural Social Organization, Wiley, 1942; pp. 65-66.

9/ The age-sex distribution on which the pyramids are based are in tables 39 and 40.

RURAL FARM POPULATION BY AGE AND SEX, CENSUS REPORT APRIL 1, 1940, AND SURVEY ESTIMATE DEC. 1, 1942, 33 EASTERN KENTUCKY COUNTIES

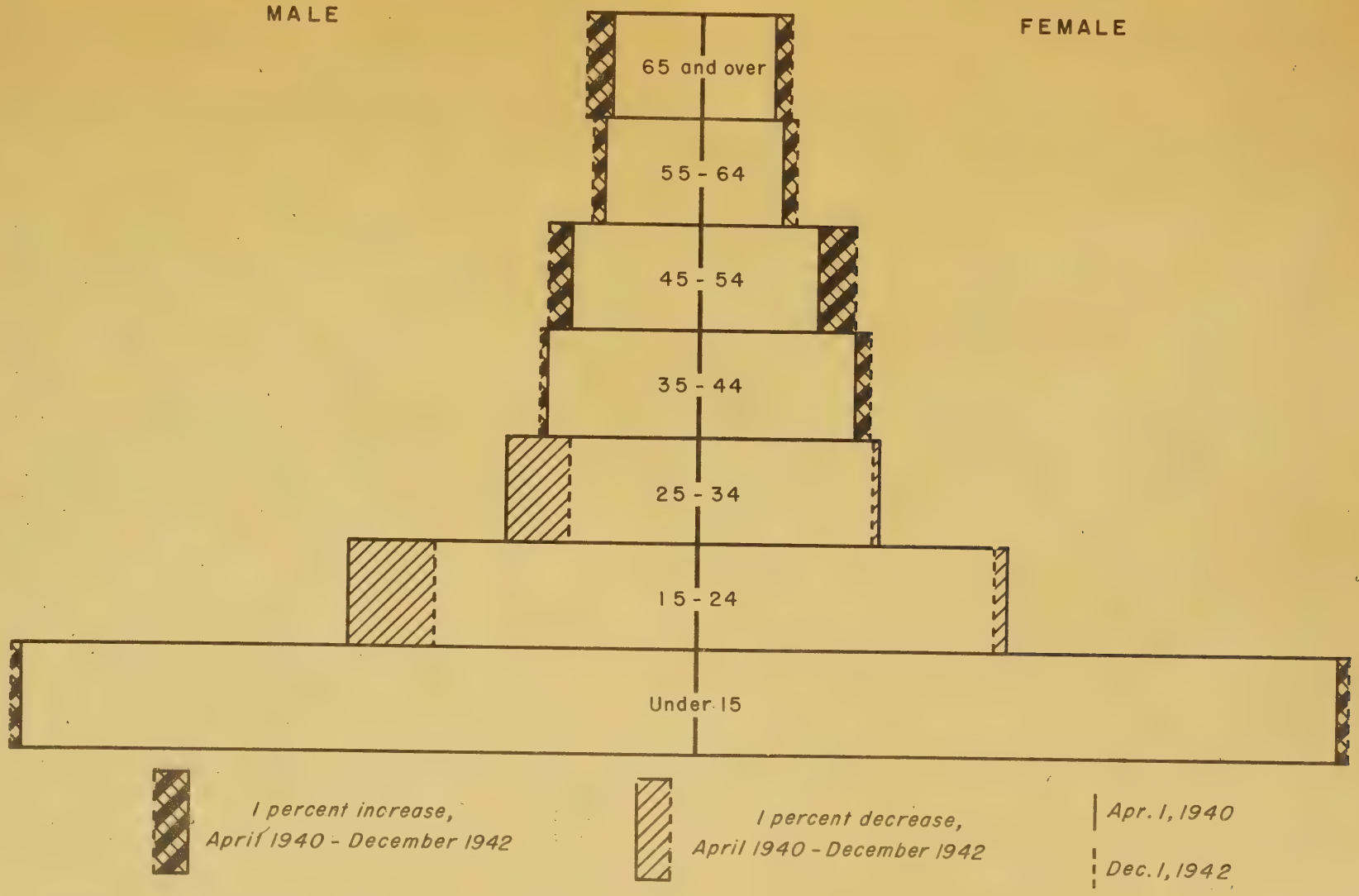

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FIGURE 2

POPULATION BY AGE AND SEX, APRIL 1, 1940, AND DEC. 1, 1942; SELECTED MAGISTERIAL DISTRICTS IN FIVE COUNTIES, EASTERN KENTUCKY

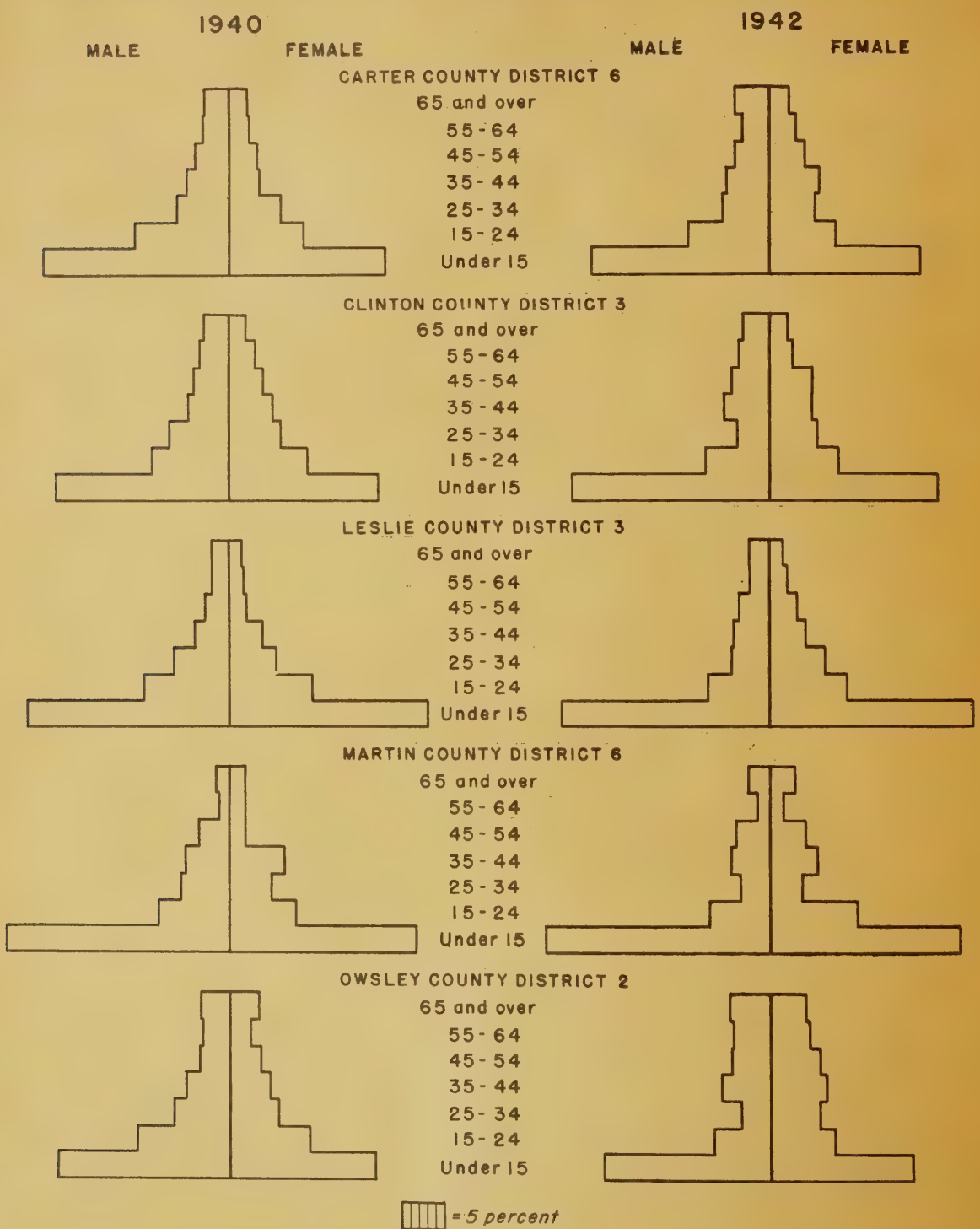

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FIGURE 3

Table 4.-Rural-farm population April 1, 1930, April 1, 1940, and December 1, 1942 and number and percent change; 33 counties in Eastern Kentucky, by county groups[1/]

County groups	1930	1940	Change 1930 - 1940		1942[2/]	Change 1940 - 1942	
			No.	Pct.		No.	Pct.
Total	382,727	449,139	66,412	17.4	364,500	-84,600	-19
Carter	82,468	85,270	2,802	3.4	60,300	-25,000	-29
Clinton	55,681	59,450	3,769	6.8	48,700	-10,700	-18
Leslie	116,172	144,893	28,721	24.7	129,100	-15,800	-11
Martin	64,089	83,144	19,055	29.7	72,600	-10,500	-13
Owsley	64,317	76,382	12,065	18.8	53,800	-22,600	-30

1/ Data for 1930 and 1940 are from the United States Census of Population and for 1942 are based upon an extension of ratios for the five magisterial districts surveyed. Percentages change from 1940 to 1942 for county groups will not agree exactly with the percentage change for the respective magisterial districts since the expansion was by age groups.

2/ Rounded to the nearest hundred.

Table 5. - Rural-farm population, census report for April 1, 1940 and survey estimate December 1, 1942, with estimated number and percent change by sex and age; 33 Eastern Kentucky counties

Age	Number						Change					
	Total		Male		Female		Total		Male		Female	
	1940	1942	1940	1942	1940	1942	Number	Percent	Number	Percent	Number	Percent
Total	449,139	364,519	233,049	180,533	216,090	183,986	-84,620	-18.8	-52,516	-22.5	-32,104	-14.9
Under 15 1/	183,005	150,809	93,721	77,266	89,284	73,543	-32,196	-17.6	-16,455	-17.6	-15,741	-17.6
15 - 24	91,795	63,071	48,594	29,675	43,201	33,396	-28,724	-31.3	-18,919	-38.9	- 9,805	-22.7
25 - 34	51,835	34,096	26,560	14,476	25,275	19,620	-17,739	-34.2	-12,084	-45.5	- 5,655	-22.4
35 - 44	42,525	37,121	21,255	17,709	21,270	19,412	- 5,404	-12.7	- 3,546	-16.7	- 1,858	- 8.7
45 - 54	33,568	34,146	17,515	16,693	16,053	17,453	578	1.7	- 822	- 4.7	1,400	8.7
55 - 64	24,314	22,633	13,064	11,853	11,250	10,780	- 1,681	- 6.9	- 1,211	- 9.3	- 470	- 4.2
65 and over	22,097	22,643	12,340	12,861	9,757	9,782	546	2.5	521	4.2	25	0.3

1/ SINCE THE SEX OF PERSONS UNDER 14 WAS NOT REPORTED IN THE SURVEY, MALES AND FEMALES UNDER 15 WERE ASSUMED TO HAVE THE SAME RATE OF CHANGE.

A decisive decline in the number of men aged 15 to 34 is noticeable in each of the five districts. In the population pyramids for the Clinton, Martin, and Owsley districts those layers which represent male population 25 to 34 are actually overhung by the next age bar, a reversal of the usual relation. In the Carter, Martin,[10] and Owsley districts, the same shift in balance has occurred among the proportions of women in these age classes. The general relation among the different age and sex groups changed less in the Leslie district than in any other, indicating some delays in the full impact of war upon the population of this more isolated area.

These pictures of the age and sex distribution in selected districts indicate clearly the unbalanced age and sex distribution of a farm population that has sent forth its workers and fighters to the armed services and war industry. The number of people remaining in the manpower reservoir of Eastern Kentucky is indicated by estimates presented later in this report.

The Movement of People from Eastern Kentucky Since Pearl Harbor.

From 6 to 15 percent of the adult members[11] of families living in the five selected districts at the time of survey had moved from the area within the first year after the United States formally entered the war (table6).

Nearly one-fourth of these persons who moved from the Carter, Leslie, and Owsley districts, were heads of families or housewives. The remaining three-fourths were persons other than heads and wives. From half to two-thirds of the people who left were between the ages of 15 and 24. Only for Carter County was the number of persons 45 or over enough to equal 11 percent of all those departing. The proportion of all emigrants who were women was under 10 percent in the Carter, Clinton, and Leslie districts, but was between 15 and 18 percent in the Martin and Owsley districts. However, excluding men who entered military service, from 17 to 36 percent of the people who left during 1942 were women.

Forty-nine percent of those leaving Owsley County went to Ohio, and another 10 percent were still in Kentucky. Twenty-one percent of those leaving Martin County, and 11 percent of those leaving Clinton County were in either Kentucky or Ohio. In all five districts, an average of about one-tenth were still within the State.

The proportion of outward-bound persons who went into military service varied among the districts. In Carter, Leslie, and Martin Counties, there were nearly equal proportions in the armed services and in other employment. In Owsley County, the proportion which had gone for work was nearly twice that entering military service. However, in Clinton, work on government dams provided enough local employment to keep at home nearly all men not taken

10/ A UNIQUE PROPORTION OF WOMEN 35 TO 44 IS SHOWN FOR THE MARTIN DISTRICT IN 1940. IT SEEMS PROBABLE THAT WOMEN OF THIS AGE WERE OVERENUMERATED, AND THAT SOME OF THEM WOULD HAVE BEEN MORE ACCURATELY PLACED IN OLDER AGE GROUPS.

11/ AGE 14 OR OVER. IN ADDITION TO THESE INDIVIDUALS THERE WERE SOME DEPARTURES OF WHOLE FAMILIES NOT DISCUSSED IN THIS REPORT BECAUSE DATA GIVEN ABOUT THEM BY LOCAL INFORMANTS WERE NOT COMPLETE.

for the army. Eighty-two percent of the 1942 emigrants from this district entered the armed services. Almost none had gone to agricultural employment from any of the selected magisterial districts except in Martin, from which 6 percent of the emigrants had gone to work in agriculture. The preference was for industrial occupations.

This movement of persons from Eastern Kentucky was occurring during the defense period, before Pearl Harbor, as indicated by the decline in population in these areas since 1940. It was a movement both to the armed services and to work. It accelerated during the latter half of 1942, and did not seem likely to become greatly retarded during the winter of 1942-43. Whether the season for spring planting would bring the return of a significant number of workers to the area, especially family heads gone temporarily, cannot be shown by this study.

Table 6.-Population aged 14 and over, December 1, 1942, and 1942 emigrant persons from resident households, selected magisterial districts in five counties, Eastern Kentucky

County and district	Total		Resident population		1942 emigrants	
	Number	Percent	Number	Percent	Number	Percent
Carter #6	1571	100	1369	87.1	202	12.9
Clinton #3	1057	100	996	94.2	61	5.8
Leslie #3	2044	100	1836	89.8	208	10.2
Martin #6	441	100	376	85.3	65	14.7
Owsley #2	1396	100	1219	87.3	177	12.7

AGRICULTURAL PRODUCTION OF EASTERN KENTUCKY FARM FAMILIES

The quantity of annual agricultural production is a good indicator of the desirability for farm families in a particular area to continue farming where they are during wartime or to work in other more favorably located areas or in industry. The "war unit" has been used in this analysis to measure the scale of farm operations conducted by Eastern Kentucky farm families. One war unit is the number of crop acres or the number of livestock requiring approximately the same amount of labor, exclusive of seasonal peak labor periods, as is used to care for one dairy cow. War unit values used in this report were essentially those included in the Selective Service System Local Board Release No. 175, dated January 16, 1943. A list of these values is included in table 41.

Under the war unit plan, unit values are assigned to crops and livestock products important to the war effort. All Eastern Kentucky crops of consequence are included in the essential group.

It has been assumed that, as a national average, each regularly employed farm worker should be able to produce 16 war units in a year, providing he has sufficient land and other resources. Recognizing that many farms at present are not equipped to produce as much as 16 war units, Selective Service Regulations have suggested 8 war units as a floor for agricultural deferment purposes. Detailed discussion in this analysis has been centered mainly around those families whose farming activities involved less than 8 units in 1942, inasmuch as the surplus labor supply is most likely to be found within this group.

The number of war units per family was based on 1942 crop acreages and livestock numbers. To receive credit for crops or livestock the family had to be responsible for the actual production. Crop acreages on land rented out to other families, for example, were not credited to the owner's family. The 359 farm families interviewed were separated into three groups depending on the number of war units scored in 1942. All families scoring less than 8 war units were placed in group I while those scoring 8 to 11.9 war units were placed in group II. Families scoring 12 war units or over were placed in group III.

The 359 farm families were distributed among the three groups with respect to the number of war units in 1942, as shown in the following table.12/ The number of war units per family within each group varied but little within the different parts of Eastern Kentucky studied (table 42).

12/ DATA WERE ALSO SECURED CONCERNING PRODUCTION PLANS FOR 1943. IT WAS VERY EVIDENT THAT FARMERS WHO PLAN TO STAY IN THE AREA WILL NOT MAKE SIGNIFICANT PRODUCTION INCREASES DURING 1943, AS INDICATED BY THE FACT THAT THE 359 FAMILIES INTERVIEWED PLANNED TO GROW ONLY 294 ACRES MORE CORN, 6 ACRES MORE HAY, AND 1 1/2 ACRES MORE SMALL GRAIN THAN IN 1942. THESE SAME FARMERS HAD ON HAND IN DECEMBER 1942, 25 LESS MILK COWS, 81 MORE HEIFERS, 9 LESS FEEDER CATTLE, 11 MORE SOWS, AND 910 MORE HENS THAN A YEAR EARLIER.

Table 7.-Farm families interviewed in selected magisterial districts in 5 counties of Eastern Kentucky, classified by war unit groups, 1942

War unit group	Families: Number	Families: Percent	War units per family
I (Less than 8 war units)	288	80	3.5
II (8-11.9 war units)	44	12	9.5
III (12 or more war units)	27	8	14.1
Total	359	100	XX

As an additional aid in making the analysis, families were separated according to tenure. The tenure groups considered include farm operators, croppers, and country residents. Country residents are distinguished from operators or croppers in that they do practically no farming. They may or may not own the tract on which they live, and earn their living at occupations other than farming. Country resident families usually keep a cow and have a home garden.

There were no croppers or country residents included in war unit groups II and III. Within war unit group I, 189 of the families were classed as farm operators, 55 as croppers, and 44 as country residents to make the total of 288 families.

Heads of families interviewed were also classified as to their potential availability for a war job. They were classified as unavailable if (a) already employed at a war job or if their farm had as many as 8 war units in 1942, or (b) if aged 60 or over, ill or otherwise unable to take the responsibility of a war job. They were classified as available if under 60 years of age, in good health, and not now employed at a war job or on a farm having 8 or more war units.

The validity of war units as an indication of the relative scale of farm operations per family is indicated by the relationship of number of war units to acres of total cropland and bottomland for farm operator families. The acreage of cropland and bottomland is proportional to the number of war units, indicating a high degree of relationship (table 8). Rotation pasture accounted for nearly half of the cropland in groups I and II, and a third in group III. Much of this rotation pasture could more properly be called idle cropland.

Table 8.-Relation of war units to acres of cropland and bottomland per operator family, by war unit groups, Eastern Kentucky, 1942

War unit group	Number of families	Average for operator families 1/		
		War units	Acres of cropland	Acres of bottomland
	Number	Number	Number	Number
I (Less than 8 war units)	189	4.3	20.0	5.9
II (8 to 11.9 war units)	44	9.5	38.1	9.6
III (12 or more war units)	27	14.1	62.1	21.8

1/ AMONG THE 288 FAMILIES WITH LESS THAN 8 WAR UNITS ONLY THE 189 OPERATOR FAMILIES ARE INCLUDED IN THIS TABLE.

Farm Production of Families Scoring Less Than 8 War Units

Eighty percent of the families interviewed scored less than 8 war units in 1942 - a definite indication of the relatively small contribution most Eastern Kentucky farm families will be able to make toward the war food production goals if they continue to operate on the 1942 basis.

The average group I family scored only 3.5 war units in 1942. The number of units per family with heads available for war work was only slightly higher - 3.6 units. Within the available group, farm operator families scored an average of 4.3 units as compared to 2.7 for croppers and less than 1.0 for country resident families. Although operator families scored more war units than the croppers or country residents, all these families contributed so little to war food supplies in 1942 that their continuance in farming during the war period probably cannot be justified as long as workers are needed for full-time jobs in other areas.

There seems to have been little difference between the farm production of families with available heads and those where heads were not available for employment. Families where the head was handicapped had fewest war units. The difference in number of war units between the groups was not very great, however, which suggests that farming resources are so limited that handicapped family heads thus disadvantaged can produce just about as much food for war in their present location as can available heads.

Total Family Production of Farm Products 13/

The most important crops produced in Eastern Kentucky include tobacco, corn, garden and truck crops for home use, hay - principally soybeans and lespedeza - and sorghum for syrup. Corn stover is an important source of roughage.

The average production of corn per group I operator family in the five selected districts totaled 133 bushels while hay averaged two and one-half

13/ PRODUCTION OF FARM PRODUCTS AND PRODUCTION FOR SALE WERE ANALYZED ONLY FOR FAMILIES SCORING LESS THAN 8 WAR UNITS IN 1942.

tons (table 9). Production of other feed crops was negligible. There was little difference in total family production, regardless of whether the farm operator worked on a war job, was unable to do farm work because handicapped, or was working full time on the farm.

About half an acre of tobacco -- practically the only cash crop -- was grown per farm reporting in 1942. It was produced on approximately half of the farms in the Carter, Clinton, and Owsley districts; practically none was grown in the Leslie and Martin districts.

Table 9.-Average production of principal crops by group I operator families; by availability of family head for war work on 189 farms in selected magisterial districts in 5 counties of Eastern Kentucky, 1942 1/

Crop	Average production		
	All farms	Families with head available for war work	Families with head not available for war work
	Number	Number	Number
Corn, bushels	133	145	124
Tobacco, lbs.	211	239	205
All hay, tons	2.5	1.9	2.7

1/ CROPPERS AND COUNTRY RESIDENTS NOT INCLUDED.

Production for Sale.

Among products sold from Eastern Kentucky farms the most important are tobacco, beef (including stocker cattle and veal calves), eggs, poultry, and butterfat. Most hogs sold go to other farms. Some butter and milk are sold, but the quantity involved is small (table 10).

For all of the 288 families with less than 8 war units the average production of tobacco - 113 pounds - would require less than one-fifth acre of land. The beef sold represents about a tenth of one animal, while the veal represents about half a veal calf. The 45 dozen eggs sold per family can be considered the yearly production of about 9 hens, while the poultry meat sold represents about 10 hens. The butterfat represents about one-tenth of the average production of one cow. These data - representing the production for sale of 80 percent of the families - are not those of a group that can justify farming as a business in wartime as long as there is need for more productive labor elsewhere. The quantities of these products sold per family in the different selected districts do not vary significantly. Neither is there any significant difference in quantities sold between families where heads are available for war work and those with family heads who are not available (table 43).

Table 10.-Average quantities of 6 products sold per family, 288 families scoring less than 8 war units; selected magisterial districts, 5 counties, Eastern Kentucky, 1942

Product[1]	Unit	Average quantity sold, all families	Average quantity sold per family reporting sales
Tobacco	Pound	113	238
Beef	Pound	49	1,115
Veal	Pound	78	178
Eggs	Dozen	45	103
Poultry	Pound	40	184
Butterfat[2]	Pound	8	74

1/ WEIGHTS ASSUMED IN CONVERTING NUMBER OF LIVESTOCK SOLD TO POUNDS ARE AS FOLLOWS: BEEF CATTLE, 500 LBS. EACH; VEAL CALVES, 150 LBS. EACH; CHICKENS SOLD, 4.13 LBS. EACH.
2/ IN CREAM ONLY.

It is estimated from data obtained by this survey that if 50 percent of the minimum of 28,000 families whose heads were available for war work were to move away from Eastern Kentucky with their families, Kentucky's annual production of butterfat in cream, cattle and calves, and poultry would decline by not more than 1 percent. Even if all of them were to move, the volume of the State's production of butterfat would diminish by less than half of 1 percent, of cattle and calves by not more than 8 percent, and of poultry by less than 6 percent.

Farm Production of Families Scoring 8-11.9 War Units

The 44 families included in this group averaged 9.5 war units for 1942. There were no croppers or residents in the group.

If their war units were considered too few in number to justify continuance of farming during wartime fifty percent of the family heads in this group would be available. As long as 80 percent of the families in the area (group I) average only 3.5, however, it would seem that recruitment efforts would be best applied to that group first. Group II families, other things being equal, will contribute over twice as much to commercial food channels in 1943 as will families in group I.

Farm Production of Families Scoring 12 War Units or Over

Of 359 farm families included in the survey only 27 had 12 or more war units. Of the 27, only 8 had 16 units or over. On the average, families in this group scored 14.1 units in 1942. These family heads were not considered available for other employment because their agricultural operations

were believed to be of a sufficient size to justify their continuing in farming during the war period.

In general, group III farms (12 units or more) contributed a significant volume of surplus production for commercial channels in 1942. They are in a relatively good position to increase the size of their enterprises in 1943. Their business is already of such size that the addition of productive units would not be too difficult. However, even on relatively large mountain farms, high productivity per worker is difficult to attain because of high labor requirements per unit of crop production. This is due to rugged topography and small fields.

INCOME FOR FAMILY LIVING

More net cash income for family living was available for the croppers and country residents, on the average, than for the farm operator families in 1942. This was due entirely to larger receipts from off farm work by the family head. Country residents, with a minus net cash farm income of $20 in 1942, had on the average more total cash for family living than either of the other two groups (table 11).

Table 11.-Income summary for 288 farm families with less than 8 war units of farm production by tenure groups, Eastern Kentucky, 1942

Item	All families	Operators	Croppers	Country residents
Number of families	288	189	55	44
Gross cash income from the farm	$109	$128	$63	$15
Cash farm operating expenses	68	83	40	35
Net cash income from the farm	41	45	23	-20
Off farm work of family head	375	317	489	520
Other non-farm income: all sources	99	123	26	89
Total net cash income to family	$515	$485	$538	$589

The most important source of cash income to farm families in Eastern Kentucky in 1942 was work of the family head off the farm. The second most important in terms of dollars was the net cash income from the farm, while third wa other non-farm income from sources such as off-farm work of family members other than the head, pensions and royalties, etc. Almost 10 percent of the families received income from pensions and royalties. Pensions were generally the chief source of cash income for families receiving them.

The average total cash income of Eastern Kentucky farm families was relatively high in 1942. The average as such, however, is misleading, inasmuch as there were a large number of families with no more to live on than their meager farm income. Net cash income from the farm was low to families in all tenure groups as well as to families where the head was available or not available for employment away from the farm. It is with respect to the income from off-farm work of the family head that the difference in total cash income to the family is greatest between those families where the head is available and those where he is not. Receipts from off-farm work of the family head were only half as great where the family head was considered available as where he was not considered available. This is to be expected as occupation of the family head - whether or not he had a

war job -, was one factor determining whether or not he was available for employment away from the farm. The influence of larger receipts due to war jobs would be offset to some extent by the fact that aged family heads (60 or over) but who did not have war jobs were also included in the group of family heads not considered available.

Table 12.-Income summary for 288 farm families with less than 8 war units in 1942, by availability of head for war work; selected magisterial districts in 5 counties, Eastern Kentucky

Item	All families	Heads available	Heads not available
Number of families	288	122	166
Gross cash income from the farm	$109	$102	$117
Cash farm operating expenses	69	59	71
Net cash income from the farm	$41	$43	$46
Off-farm work of family head	375	227	448
Other nonfarm income: all sources	99	90	94
Total net cash income to family	$515	$360	$588

Family heads with war jobs frequently received as much as $1,500 for off-farm work in 1942. Most families scoring less than 8 war units had much less than the average total cash income of $515, however, many had no more than their very meager farm incomes on which to live.

To summarize, there seems little doubt that most Eastern Kentucky farm families considered as available for other employment could substantially raise their level of living and contribute more to the war effort by moving to more productive employment.

FARM INCOME

Sources of Gross Cash Farm Income

The gross cash farm income was principally from burley tobacco, livestock, and livestock products (table 13). Purchased feed, hired labor, seeds, fertilizer, and purchased livestock constituted the important farm operating expense items, their relative importance being in that order.

The gross value of all farm products sold averaged $128, $63, and $15 for operators, croppers, and country residents, respectively (table 13). The value of food products sold averaged even less, since the average gross value of all farm products sold includes tobacco. Farm operators had the highest gross cash farm income in the Clinton County district with $211; the highest average for croppers, $139, was also in the Clinton district.

Table 13.-Average gross cash farm income, by tenure groups and by source, for farm families with less than 8 war units in 1942; Eastern Kentucky, December 1942

Number of families and source of gross cash farm income	Operator	Cropper	Country resident
Number of families	189	55	44
Tobacco	$42	$30	$ 0
Other crops	14	3	0
Livestock	52	20	7
Livestock products	20	10	8
Total, all farm sources	$128	63	15

Cash Farm Operating Expenses

Cash farm operating expenses averaged $83 per family for farm operators and less than $50 for croppers and country residents (table 14). Feed was the principal expense item of the croppers and country residents. Largely because of higher expenditures for feed and hired labor the average farm expenses for the families whose heads were not available for war work slightly exceeded those of the available family heads. This indicates that even though gross cash farm income may remain about the same when the family head works off the farm, farm operating expenses, especially for feed, are likely to increase.

Table 14.- Cash farm operating expenses by tenure groups; families scoring less than 8 war units, Eastern Kentucky, 1942

Number of families and kind of farm operating expense	Operator	Cropper	Country resident
Number of families	189	55	44
Labor hired	$13	$9	$ 1/
Feed bought	22	12	23
Seeds bought	9	3	1
Livestock bought	12	5	4
Other expenses	27	11	7
Total	$ 83	$40	$35

1/ LESS THAN 50 CENTS.

Net Cash Farm Income

Net cash income from the farm averaged only $41 per family in 1942. Operators, croppers, and country residents averaged $45, $23, and -$20, respectively. Farm expenses exceeded gross cash farm income for 36 percent of these families. Only 21 percent had net cash farm incomes of $150 or more (table 44). Seventy-one percent of the families in the Leslie, 53 percent in the Martin, 29 percent in the Carter, and 25 percent in each of the Clinton and Owsley districts had minus net cash farm incomes. At the other extreme, 35 percent of the families in the Clinton, 30 percent in the Carter, 24 percent in the Owsley, 8 percent in the Leslie and 5 percent in the Martin districts had net farm incomes of $150 or over.

Relationship of Acres of Bottomland to Farm Income and Other Factors

The purpose of this section is to indicate the relationship of the acreage of bottomland to income and to the volume of production for sale. The relationship between the number of war units and acreage of bottomland per farm has already been indicated (table 8). In previous studies the acreage of bottomland has been shown to be related to income in this region.14/

Net cash farm income averaged $208 in 1942 for 82 Carter County farm operator families, ranging for example from $137 for the farms with less than five acres of bottomland to $429 for those having 15 or more (table 15). The acreages of cropland and of crops harvested were practically twice as large on farms having 15 or more acres of bottomland, as on those with less than 5 acres.

14/ CF. NICHOLLS AND OTHERS, KY. AGR. EXP. STA. BUL. 375, PAGE 168.

Table 15.-Relation of bottomland acreage per farm operator family to income and other factors, 82 farm operator families in district #6 Carter County, Kentucky, 1942

Acres of bottom land	Number of families	Acres of crop land	Acres of cropland harvested	Income from tobacco	Net cash farm income	Income from off-farm work by family head
Less than 5.0	19	17	13	$91	$137	$150
5.0 to 14.9	35	21	14	100	144	691
15.0 and over	28	38	25	207	429	653

Income received by farm operator family heads for off-farm work was larger in the Carter than in the other districts included in this study. As already indicated, more of the operators had war jobs than in the other districts. A relatively high degree of off-farm employment also indirectly influenced the income of some farmers in the Carter district by affording them an opportunity to rent bottomland from farmers with full time employment off the farm. Because of the limited areas of well drained bottomland, few opportunities exist for increasing production through farming more good land.

Organization and Income of Four Representative Farms in 1942

It is desirable to show the actual 1942 organization of the four farms for which the utilization of the family labor supply is discussed to indicate further why the labor supply is so inadequately utilized.

The group I farm with tobacco had 100 acres of land of which only 16 were open cropland. This farm had no bottomland, but had 4 acres of "bench land," the remainder being hillside land. All the crops except the potatoes and garden were grown on the hillside (table 16). Except for a half acre of burley tobacco, crops on this farm were grown to help supply home needs.

The farm in group I selected to represent those without tobacco had 70 acres of land, 25 of which were open cropland. There were two acres of bottomland on the farm. Production was largely for home consumption as on the farm with tobacco (table 16). Surplus chickens and eggs and a veal calf were sold. The $5 net cash income from the farm was supplemented by $115 earned by working at a local logging job for 60 days during September, October, and November.

The farm selected to represent those scoring between 8 and 11.9 war units (group II) had 73 acres of land, of which 50 were open cropland. The pasture included 22 acres, while crops were harvested from 28 acres. This farm had 25 acres of well-drained creek bottomland, nearly all of which

were used for harvested crops. Two acres of corn and one-fifth acre of tobacco were produced on the hillside. Sources of gross cash income were tobacco, cattle, and chickens. The income from cattle - more than usual for farms of this size -- was from the sale of two veal calves and the gain in weight from six calves bought in the spring and sold in the late fall (table 16).

Sixty of the 109 acres of the farm selected to represent those scoring 12 war units or over (group III) were gently rolling cropland; the remaining 49 acres consisted of rough, broken upland. Two-thirds of the cropland was used for harvested crops and one-third for rotation pasture. Because of the larger crop acreage and higher production of corn per acre on this farm, more produce was sold than on the farms representing groups I and II. In addition, more pork and poultry products were used at home. This farm illustrates the production situation on one of the relatively few commercial ridge land farms in Eastern Kentucky. There are also a few commercial bottomland farms in the area.

Table 16.- Crop acreages, livestock numbers, receipts, farm operating expenses, and net cash income from the farm; selected farms in war unit groups I, II, and III, selected magisterial districts in 5 counties, Eastern Kentucky, 1942

Item	Farms selected to represent work unit group: 1/							
	I Without tobacco	I With tobacco	II	III	I Without tobacco	I With tobacco	II	III
	Acreage and gross receipts from crops							
(Kind)	(Acres)				(Receipts)			
Total	25.0	16.0	50.0	60.0	$0	$105	$321	$401
Tobacco	0.0	0.5	1.3	1.5	0	105	321	368
Corn	9.0	5.0	9.0	20.0	0	0	0	0
Sorghum	0.0	0.0	0.2	0.2	0	0	0	0
Oats hay	0.0	0.0	3.0	0.0	0	0	0	0
Wheat	0.0	0.0	0.0	5.0	0	0	0	0
Lespedeza hay	0.0	0.0	10.0	10.0	0	0	0	0
Red top & timothy	0.0	0.0	0.0	5.0	0	0	0	0
Soybean hay	0.0	2.0	4.0	0.0	0	0	0	0
Irish potatoes	0.5	0.2	0.0	0.2	0	0	0	18
Garden & truck	0.5	1.0	0.2	0.5	0	0	0	15
Rotation pasture	15.0	7.3	22.3	17.6	0	0	0	0
	Livestock numbers and gross cash receipts from livestock and livestock products							
(Kind)	(No.)				(Receipts)			
Total	XX	XX	XX	XX	$35	$ 34	$424	$269
Dairy cows	1	1	2	3	0	0	20	20
Other cattle	0	0	6	3	20	18	325	32
Sows	1	1	0	2	0	0	0	0
Other hogs	5	2	1	14	0	0	0	102
Hens	50	30	75	100	15	16	79	115
Workstock	1	1	2	2	0	0	0	0
Colts	0	0	0	1	0	0	0	0
	Cash expenses for farm production							
(Kind)					(Amount)			
Total					$30	$ 82	$336	$153
Feed purchased					0	14	29	11
Labor hired					0	18	0	10
Seeds					0	15	27	24
Livestock purchased					20	16	207	0
Other expenses					10	19	73	108
Cash receipts less amount cash expenses					$ 5	$ 57	$409	$517

1/ WAR UNITS OF SELECTED FARMS IN 1942: GROUP I 4 (WITHOUT TOBACCO)
I 4 (WITH TOBACCO)
II 9
III 14

INCOME FROM OFF-FARM WORK

Coal mining, logging, sawmilling, clay mining, brick making, land clearing, maintenance work on gas lines, and farm work were the major type of off-farm work performed by family heads in 1942.

Employment in off-farm work occurred most frequently in the Carter County district, where war jobs in Carter County and nearby industrial centers of Ashland, Huntington, and Charleston were most accessible.

In each tenure group, average income from off-farm work by the family head greatly exceeded the average gross cash farm income. Average earnings of the head from this source for all the 288 group I families was $375. Country residents had the largest average income from off-farm work - $520 - as compared with $489 for croppers, and $317 for operators. It has been previously indicated that most country residents are simply nonfarm industrial workers living in the country.

The average income from off-farm work of the family head greatly exceeded the gross cash farm income in all five districts. The income from this source for non-available family heads averaged practically double that of available heads. This was because many of them not available already had war jobs. It will be recalled that present employment was a factor in determining availability for war jobs.

The fact that income of croppers and country residents for work off the farm was higher than that of non-available farm operators indicates that a larger proportion of croppers and country residents have already obtained war jobs. This is believed due chiefly to the fact that their interest in farming was less and the need for supplementary income greater than was the case with the operators.

OTHER NONFARM SOURCES OF INCOME

In addition to farm income and receipts from work of the family head away from home, an average of $99 per family was received from other nonfarm sources, averaging $123 for the operators, $26 for the croppers, and $89 for the country residents. Thirty-six percent of the available family heads and 29 percent of those not available received this type of income. Sources of this other income included work by members of the farm operator's family, other than the head, living at home; income sent home by family members living away; pensions; gas royalties; and timber sales. Work away from the farm by other family members who lived at home was the principal source of other nonfarm income for the croppers. Country residents had nonfarm income from pensions, in addition to income from work by family members other than the head. The income from off-farm work of family members other than the head was highest for this group.

The difference in income from farming and other sources by tenure groups is largely the result of variations in the amount of farm products sold. Many operators and most croppers are producing such small quantities of products for sale that many feel they are not justified in continuing to farm in their present location during the war.

LABOR REQUIRED AND FAMILY LABOR AVAILABLE ON FOUR REPRESENTATIVE EASTERN KENTUCKY FARMS

Representative farms were selected from the group operated by the 263 farm operator families (the remainder of the 359 families were croppers or country residents) to show the degree of utilization of the family labor supply. The degree to which the available labor supply is utilized should throw some light on the question of whether or not the family can justifiably continue to operate the type of farm represented during wartime. Two farms were selected to represent those families scoring less than 8 war units, one of which grew tobacco. This was considered desirable as about half the families in 3 of the 5 districts into which Eastern Kentucky has been divided grew tobacco in 1942. Only one farm was selected to represent each of the other two war unit groups.

The tobacco farm representing those scoring less than 8 war units used approximately 130 ten-hour man-days of labor in 1942, of which corn required about half.[15/] Most of the man labor for corn was used for hoeing during May and June (fig. 4).

The workers available included the farmer, his wife, and a daughter aged 14. These family members could have furnished approximately 360 man days of labor as compared with the 130 used in 1942. It is not to be assumed however, that it would have been practicable to use the entire 360 days of labor inasmuch as labor requirements are very unevenly distributed through the year. It can be assumed that at least 275 days could have been used had the work been needed. A total of 18 days labor were hired for hoeing corn and harvesting hay. Other work not included in the listed requirements was done, including such tasks as cutting wood and repairing fences, buildings, and machinery. From the standpoint of productive farm work the labor required for these miscellaneous tasks was insignificant.

The group I farm (without tobacco) used 140 ten-hour man-days of labor in 1942. The labor required by the larger acreages of corn was nearly double that on the tobacco farm. The livestock requirements - 14 days - were just half those on the tobacco farm. There were more family workers on this farm than on the one with tobacco. The farmer, two boys, 19 and 13, and two girls, 16 and 13, could have furnished 600 days of labor had the labor been needed. Labor requirement peaks occurred in May and June. "Slack" periods occurred in July and during the winter (fig. 4). It is significant that all the farm work could have been done without either the man or the older boy. There are many situations like this in Eastern Kentucky.

The farm chosen to represent those with 8 to 11.9 war units (group II) required 240 ten-hour man-days of labor in 1942, a hundred more than either of the two representative group I farms. Three-fourths of the work on this farm was used for crops, again principally corn and tobacco. The farmer, his wife, and a 15 year old son, (the latter working mostly during the summer months) were available to do this work. Available labor

15/ FOR LABOR REQUIREMENTS PER UNIT OF CROPS AND LIVESTOCK IN EASTERN KENTUCKY, SEE TABLE 45.

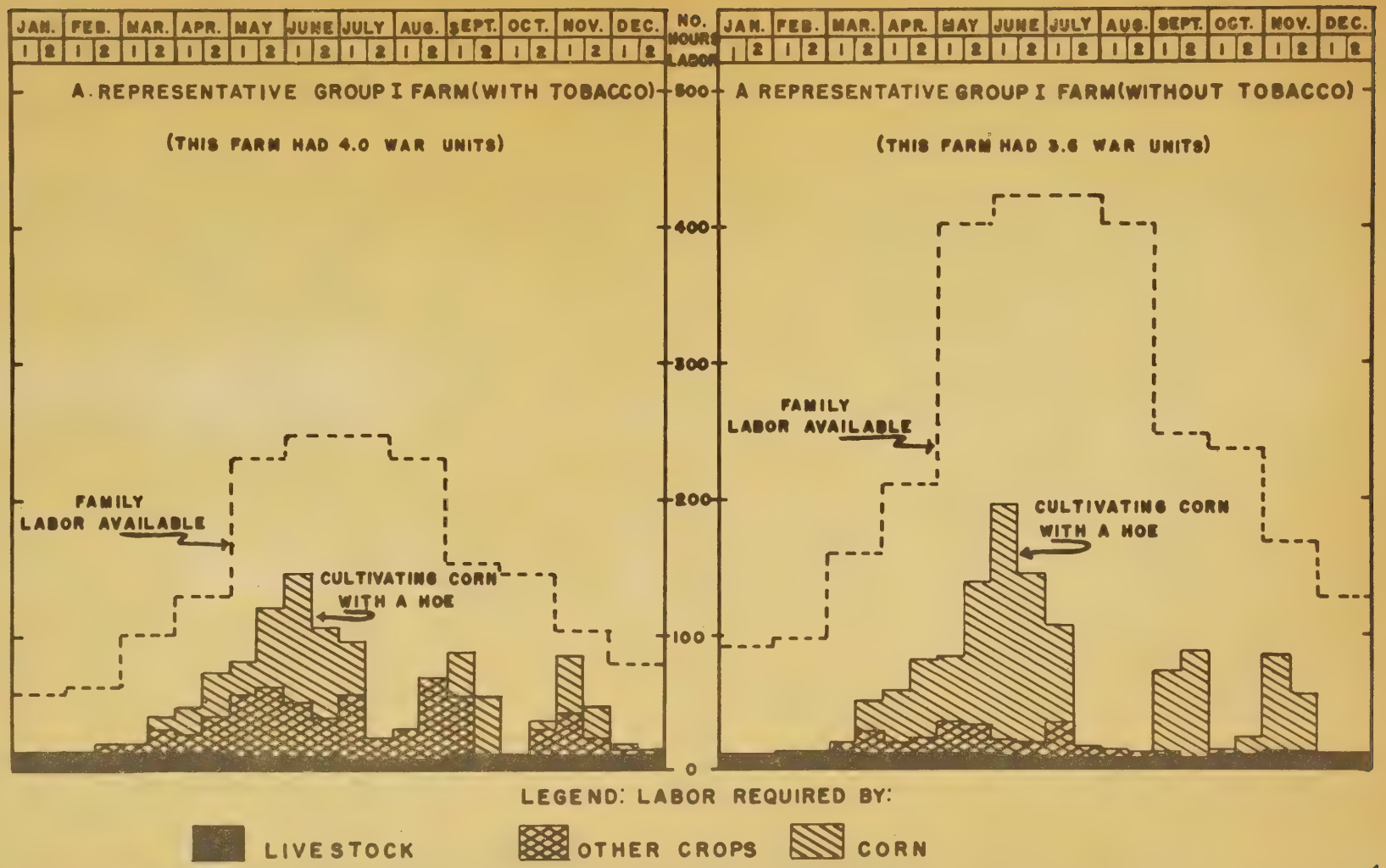

FIG. 4 LABOR REQUIRED AND AVAILABLE ON TWO REPRESENTATIVE FARMS, WAR UNIT GROUP I[1] EASTERN KENTUCKY

[1] BASED ON 1942 ENTERPRISES

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FIGURE 4

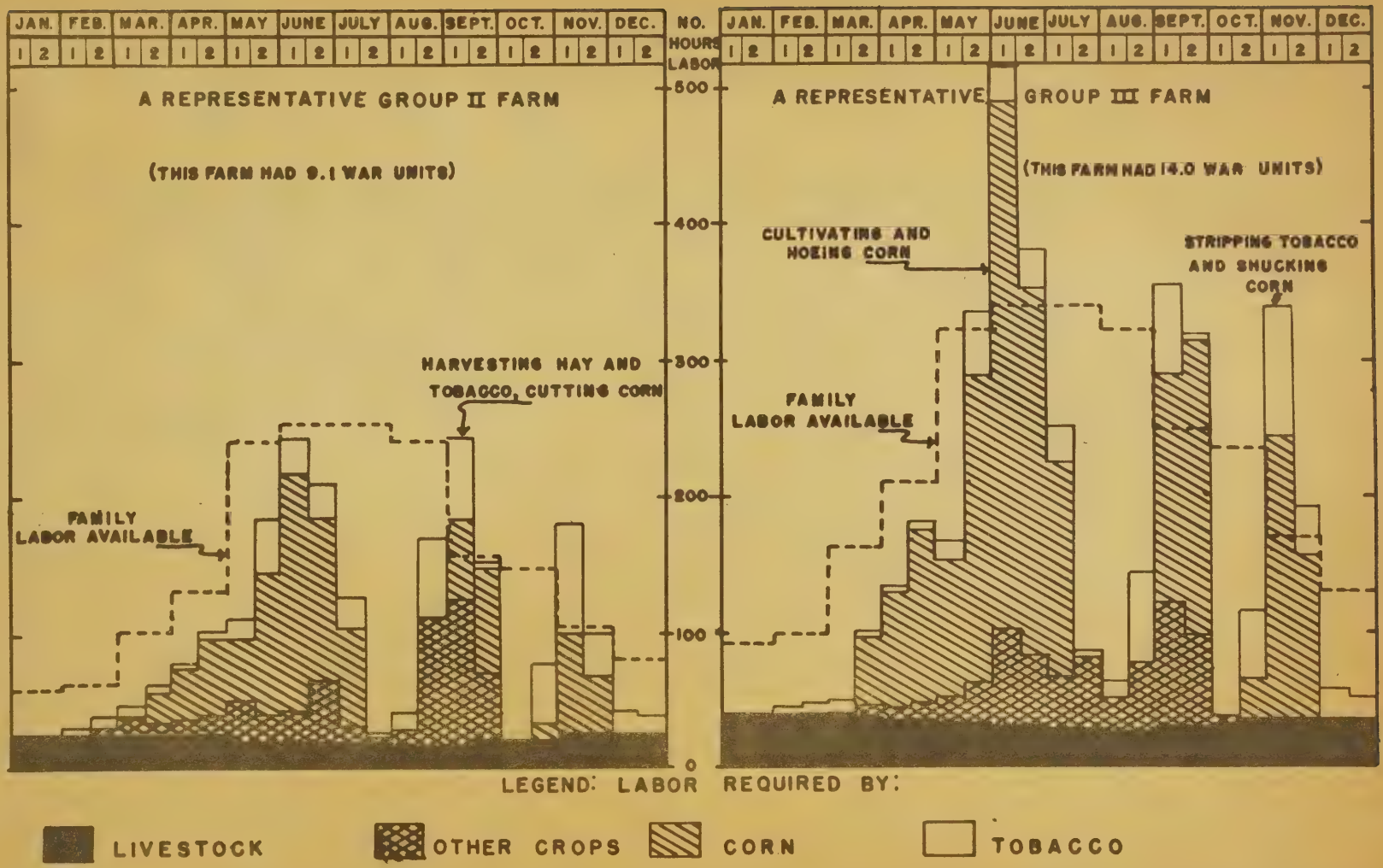

FIG. 5 LABOR REQUIRED AND AVAILABLE ON REPRESENTATIVE FARMS, WAR UNIT GROUPS II & III[4]
EASTERN KENTUCKY
4 BASED ON 1942 ENTERPRISES

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FIGURE 5

was below requirements on this farm in September and November, but a surplus existed during parts of July, August, and October (fig. 5). This farm was not very productive in terms of food for war on a per worker basis.

The farm representing the type operated by families scoring 12 war units or more (group III) required 390 ten-hour man-days for 1942 production - three times as much as either of the two farms in group I, and over fifty percent more than the group II example. Corn required half the total labor, tobacco one-seventh, and livestock about one-fifth. The family members available to do the work were the farmer, his wife and two boys 17 and 11. These workers could have furnished a total of 540 days of man labor in 1942, had requirements been distributed in a way to make possible its use. "Slack" periods occurred in July, August, and October, but the labor demand exceeded the supply in June and November. Additional workers were hired to meet seasonal labor peaks.

Although family labor is much more fully utilized on the group III farms, such farms constituted only 8 percent of the 359 farms for which farm business records were obtained (table 17).

The fact that family labor was comparatively fully utilized on the larger farms is not evidence that it was productively utilized. Using a full day's labor to produce 1 bushel of corn cannot be considered fully productive when a day's labor will produce as much as 15 bushels of corn in some areas. In considering whether or not available farm labor is utilized adequately or not, therefore, both the time spent and the product obtained should be taken into account. This analysis, which shows only the proportion of family workers available time used, does not indicate whether or not the labor was productively used. It shows only the amount of time spent in tending the crops.

Table 17.-Labor available and required on four farms representing three war unit groups in Eastern Kentucky, 1942.

War unit group	Days available[1/]	Days required[1/]	Days required as percent of available
	Number	Number	Percent
I (no tobacco)	601	140	23
I (with tobacco)	356	130	36
II	365	241	66
III	535	392	73

1/ Assumes 10 hour days.

FARM COMBINATION POSSIBILITIES

Any discussion of farm combination possibilities in Eastern Kentucky should consider the fact that most families whose heads are not available for other employment will be unable to increase their farm production because they are handicapped or already doing war work. Farm operators 60 years of age and over, considered not available, cannot, as a group, be expected to produce much more than they did in 1942, particularly since many of the men of working age in their families have gone to the army or to work in industry. Family heads classed as not available who live at home but already have war jobs will give major attention to this work rather than to expanding farming operations. The farming that was carried out in 1942 on such farms was performed mostly by the wife and children. In other words, if all available family heads on farms with less than 12 war units were to leave the area for other work, those who remained could do but little to utilize the farms vacated. 16/

The relatively small number of family heads whose farming operations scored 12 units or more could probably increase their total units to 16 or more in 1943. In most instances these increases could be brought about by renting additional level or bottomland, or by producing with family labor the crops formerly produced by other farmers living on the same farming unit. Where additional feed is available, increases in dairy cows, hens, or other livestock could be made. When one or more families leave a farm now occupied by two or three families, additional farm products could be produced for sale by those who remain because less of the total farm production would be used for home consumption.

If it were to be assumed that only half the available families scoring less than 12 war units were to leave the area it is possible that their neighbors who remain, also classified as available, might increase their operations. Obstacles to be overcome, however, would be numerous.

The extent to which such increases could be possible would depend largely upon the location of the vacated farms in relation to those remaining occupied. The topography and roads of Eastern Kentucky are such that, unless vacated farms are close to the units already being operated, it would be impracticable for their neighbors to utilize them. Even if vacated units were farmed, it is probable that only bottomland or a small part of the best hill land would be tended. This would be desirable from the standpoint of labor utilization, since hillsides require much more work per unit of production, and also because cropped hillsides are subject to soil erosion.

Some farm combination as a result of migration by farm families has already developed in Carter County where more families have already

16/ IT IS ASSUMED THAT ENTIRE FAMILIES WOULD MOVE. WHILE THIS WILL GENERALLY BE THE CASE, HEADS MAY BE EXPECTED TO LEAVE THEIR FAMILIES BEHIND IN SOME CASES, IN WHICH EVENT THE AMOUNT OF FARMING WOULD BE ABOUT THE SAME AS IF THE FAMILY HEAD REMAINED ON THE FARM.

left than in the selected magisterial districts of the other farm areas. A few cases were observed where farmers adjacent to vacated farms tended the bottomland on these otherwise idle farms in addition to carrying on the usual operations on their own farm.

Table 18 shows the 1942 crop acreages and livestock numbers for two representative farms in war unit group I. One of these farms (A) grew tobacco in 1942 and had 4.0 war units. The other farm (B) had 3.6 war units. For this illustration it was assumed that an effort would be made to combine these two farms following the departure of the family on farm B. It would not be practicable for farmer A to absorb all the enterprises of B even if the farms were located adjacently. Of the nine acres of corn grown on farm B, not more than three would probably be added to farm A. All the corn on both these farms was grown on steep hillsides. The garden and truck crops of farmer A would be the same acreage as "before combination". The probability is that A would utilize only a part of the pasture on the vacated farm.

Even though all enterprises from farm B are not absorbed, the total value of sales would be slightly greater after combination. No butterfat would be sold when the farms were operating separately but 80 pounds would probably be sold on the combined basis. Sales of 35 dozen eggs and 12 pounds of poultry might be lost as a result of the combination, since farmer A probably would not add the 50 hens of farmer B to his flock.

If it is assumed that the production for sale from the two farmers would be slightly increased as a result of the combination described, there would still be a net reduction in total food produced by the two families since food for home use for the family that left would no longer be produced on the farm vacated. This would have to be produced by someone else if the vacating family went into nonfarm work. The probabilities are, however, that it could be produced at a much lower cost elsewhere in terms of manpower.

The combination of group I farms with those in groups II and III does not offer much possibility of net productive increas. Group II farmers, however, might find it desirable to also operate group I farms in a few instances, especially since one-half of the group II farmers may be classed as available for war work. Where combination is feasible it should be encouraged as a means of increasing the production of war foods which will enter commercial channels.

Farm Combination Possibilities on Hog Pen Creek

The situation on several of the individual farm units along Hog Pen Creek in Owsley County are illustrative of the manpower available and the possibilities for farm combination. This example, for which the farm layout is given in figure 6, is found hundreds of times in Eastern Kentucky.

The most "prosperous" farmer of the group lived on farm No. 1 - which

Table 18.- Organization of two representative group I farms (A and B) and estimated changes in farm enterprises under management of B following combination; Eastern Kentucky

Item	Before combination 1/		Total A and B	After combination
	Farm A	Farm B		
	Crops			
	(Acres)	(Acres)	(Acres)	(Acres)
Tobacco	0.5	0.0	0.5	0.5
Corn (hillside)	5.0	9.0	14.0	8.0
Soybean hay	2.0	0.0	2.0	2.0
Irish potatoes	0.2	0.5	0.7	0.2
Garden and truck	1.0	0.5	1.5	1.0
Pasture	7.3	15.0	22.3	15.0
Bottom land	0.0	0.0	0.0	0.0
Harvested cropland	8.7	10.0	18.7	11.7
Idle cropland and pasture	7.3	15.0	22.3	29.3
Land in farm	100.0	70.0	170.0	170.0
	Livestock			
	(No.)	(No.)	(No.)	(No.)
Milk cows	1	1	2	2
Other cattle	1	1	2	1
Sows	1	1	2	1
Other hogs	0	5	5	0
Hens	30	50	80	30
Workstock	1	1	2	1
	Production for sale			
Butterfat (lb.)	0	0	0	80
Veal (lb.)	150	150	300	300
Eggs (doz.)	25	35	60	25
Poultry meat (lb.)	15	12	27	15
	Production for home use			
Butterfat (lb.)	130	130	260	180
Eggs (doz.)	65	115	180	65
Poultry meat (lb.)	60	75	135	60
Pork (lbs. live.wt.)	300	0	300	300
Irish potatoes (Bu.)	20	0	20	20

1/ FARM A HAD 4.0 WAR UNITS IN 1942, AND B HAD 3.6 WAR UNITS.

FARM UNITS IN HOGPEN CREEK WATERSHED, MAGISTERIAL DISTRICT NO. 2

OWSLEY COUNTY, KENTUCKY

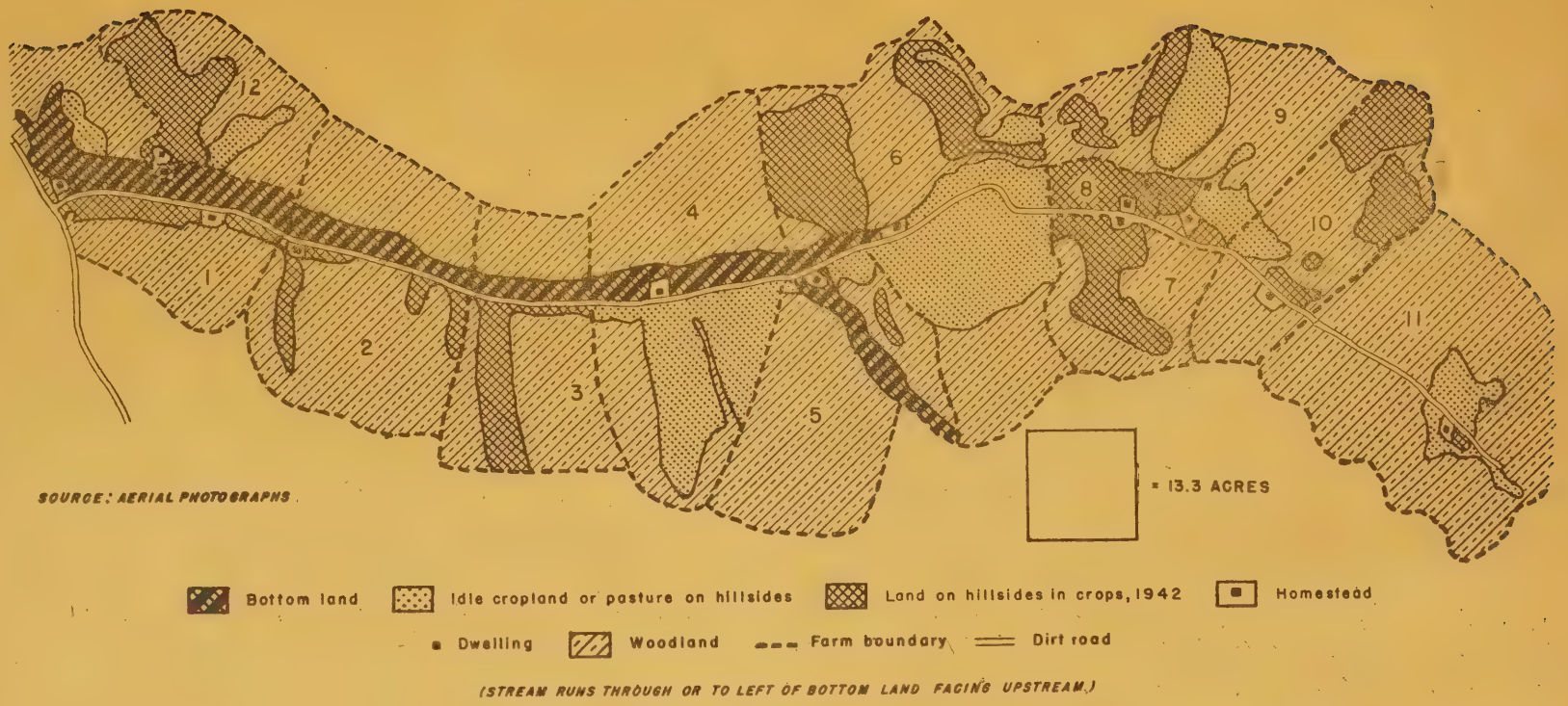

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FIGURE 6

it will be noted has more bottomland than any of the others. His two sons-in-law and their families were croppers on his farm. Both of these young men were available for other work. Production for sale on the farm could be increased if the two sons-in-law were to leave for war work inasmuch as the owner could easily produce all the crops on his unit, and a smaller proportion of the total production would be needed for home use.

Although a "widow woman" lived on farm No. 2, and tended about 5 acres of the hill land (rent free) the best land on the farm, the bottomland, was idle during 1942. Neighbors said that the farm owner couldn't be located for making rental arrangements. It was rather evident, however, that most of these farmers would rather crop their own steep hillside and get all the produce than go to the trouble of renting bottomland from which they would get only half the crop.

Farm 3 was idle except for a few acres of hillside corn grown by the "widow woman" who lived on farm No. 2. The operator of farm No. 4 was about 80 years of age, hence could do but little farming. Except for a few acres of bottomland, all his cropland was idle in 1942.

The operator of farm 5 left for Cincinnati, Ohio the day before his family was interviewed. His wife and 3 children were left behind until he could make enough money "to get started" and find a place for them to live in Cincinnati.

On farm 6, where four of the family members were mentally handicapped, there was only enough bottomland for a garden - all other cropping was done on the steep hillsides back of the dwelling.

Farm 7 was operated by an FSA client. This young man worked in Cincinnati about 5 years ago and was considering returning as soon as his tobacco was stripped. The tobacco was being stripped in one of the two rooms of the dwelling the day the interview was made. As figure 6 shows there was no bottomland on this tract. The hillsides were not as steep as on the other farms discussed.

Farm 8, consisting of 15 acres, was owned and operated by a widow.

Two families lived on farm 9 - the operator family and a country resident family. The head of the country resident family was the fourth family head considered available for was work along this stream. He had at one time worked in Cincinnati - was doing "nothing much" at the time of the interview except working occasionally for neighbors. The head of the operator family was about 70 years old.

The operator of farm 10 earned most of his living by working his "wagon coal mine."

The garden was the only part of farm 11 that was cultivated in 1942. This unit was operated by a man 72 years old who evidently was living on money earned in past years. He had one cow on the "pasture" surrounding the dwelling.

The farmer on unit 12 had only enough bottomland for his garden. He claimed that as a result of having been "snake bit" a few years ago his health would not permit him to do "heavy work." His half acre of tobacco provided practically all his cash income. He was over 60 years of age.

It seems readily apparent, after an analysis of the situation on each farm in Hog Pen, that few opportunities exist for farm combination, particularly in the event the family heads available for employment left the area. The situation on farm 1, would however, be improved, and is one form of farm combination.

If the available family heads left, then those who remained, mostly men over sixty years old or widows, could be expected to do little if anything toward expanding their farm operations. The amount of off-farm exmployment of family heads was less along this stream than average for the area.

Farm Combination Possibilities on John's Run Creek

The arrangement of farms in the John's Run Creek Watershed, a small stream in the Carter County district, indicates some of the difficulties involved when farm combination is attempted, as well as some of the possibilities (fig. 7). These families averaged about 3.5 war units in 1942; none had over 8 units. All of the farm No. 10 and all except three acres of farm No. 7 were idle as a result of the families moving to industrial work.

The amount of bottomland available for each of the farms in this water-shed varied from one to seven acres. All of the bottomland on this two and one-half mile stream could be farmed by two or three farmers. The distance to and from the long, narrow fields would be an inhibiting factor, although many farmers in this area walk long distances to their corn fields.

Crops were grown on the hillsides along this stream in only a few places. Most of the hillside land along this stream is now idle. It has been cropped, but not in the last few years. Hillside cropping seems to have decreased almost in proportion to the rate at which the farmers along the stream obtained part or full time industrial work, after which they farmed the relatively easily tilled and more productive bottomland.

Only 2 of the 9 family heads along this stream were classed as available for work outside the area. It is likely that if one of these left, part of his farm operations would be absorbed by the other available family head, since the two farms are near each other.

Farm Combination Possibilities on Little Fork Creek

The John's Run situation is repeated hundreds of times in the Eastern Kentucky area. A less frequent but more desirable situation from the standpoint of farm combination possibilities is illustrated by a group of farms along the Little Fork Creek of Little Sandy River, in the Carter district (fig. 8). The relatively wide bottomland areas on vacated farms in areas like this could easily be cropped by farmers remaining in the area who do not already have too large a business in relation to their available family labor. Most of the farms in the Carter district with enough war units to be classed in groups II and III were located along this stream but only a few of the family heads along this stream were considered available for work away from the farm.

FARM UNITS IN JOHN'S RUN CREEK WATERSHED, MAGISTERIAL DISTRICT NO. 6

CARTER COUNTY, KENTUCKY

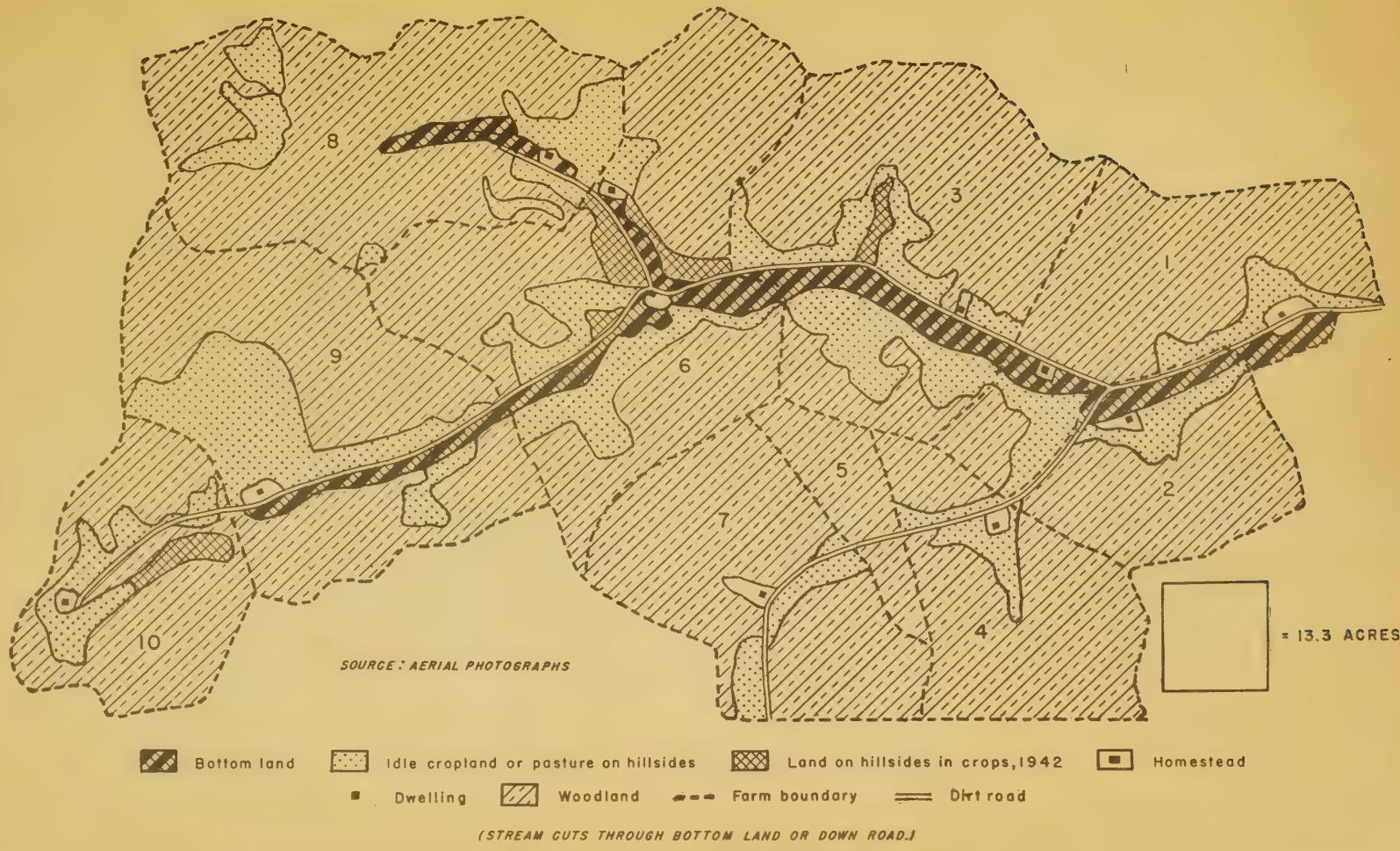

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FIGURE 7

FARM UNITS WITHIN A CROSS SECTION OF LITTLE FORK CREEK WATERSHED, MAGISTERIAL DISTRICT NO. 6

CARTER COUNTY, KENTUCKY

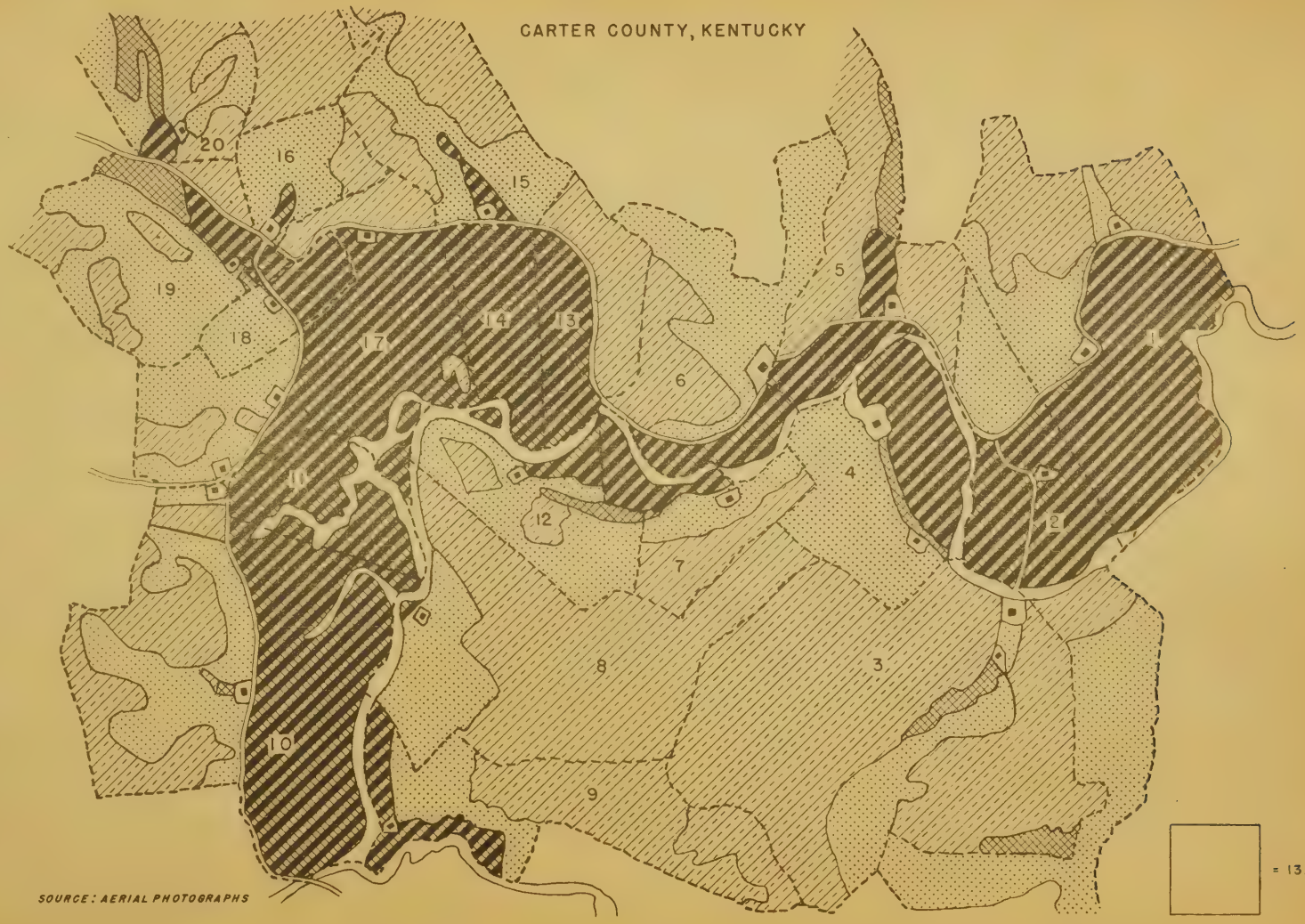

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FIGURE 8

LABOR REQUIRED AND AVAILABLE FOR TOTAL CROP AND LIVESTOCK PRODUCTION IN THE 33 COUNTIES AREA

If 1943 production goals are met and the labor supply during the year remains at the December 1, 1942, level, the labor available for farm production in Eastern Kentucky will be much greater than the need, particularly during the peak labor requirement period (fig. 9).17/ More labor is available per month during the summer because the children are out of school and because more hours per day can be used for farm work. The peak labor requirement period occurs during the latter half of May and June. Corn cultivation is primarily responsible for the peak.

Labor requirements per acre of corn are very high in the area - 100 hours as a minimum average for the area, which includes both bottom and hillside corn. Estimates for requirements on the hillsides run as high as 160 hours per acre as contrasted with 25 man hours in the Coastal Plains area of Georgia, for example.

Labor required during the winter months is applied mostly to livestock production. Most of this labor might be performed as chore labor at the beginning and end of the working day, during the entire year if necessary - thus lowering labor requirements throughout the year to that extent.

Figure 9 has two availability curves, one showing the amount of labor available if 26 days per month could be utilized, the other showing labor available for farm work considering soil and weather conditions. The difference between the two curves indicates the amount of available labor that cannot be used on the farm because of weather and soil conditions which prevent work in the fields.

17/ THE AVAILABLE LABOR WAS ESTIMATED AS FOLLOWS: THE AVERAGE FAMILY LABOR SUPPLY FOR FARM WORK IN TERMS OF MAN-EQUIVALENT UNITS WAS 1.9 PER FAMILY WITH EMPLOYABLE HEADS AS COMPARED WITH .7 PER FAMILY WITH HEADS NOT EMPLOYABLE. THE AVERAGE OF THESE TWO GROUPS OF FAMILIES WAS APPROXIMATELY 1.3. FOR THIS ANALYSIS IT WAS ASSUMED THAT 1.3 MAN-EQUIVALENT UNITS OF LABOR COULD BE FURNISHED BY ONE MALE ADULT WORKER PLUS A BOY 15 YEARS OF AGE AND A GIRL 15. THE BOY AND GIRL WOULD WORK ONLY DURING MAY, JUNE, JULY, AND AUGUST. THE BOY WOULD BE CONSIDERED EQUIVALENT TO .5 AN ADULT WORKER AND THE GIRL .3 AN ADULT WORKER DURING THE 4-MONTH PERIOD. TO SECURE THE TOTAL LABOR SUPPLY POTENTIALLY AVAILABLE DURING ANY GIVEN MONTH, THE PROCEDURE WAS AS FOLLOWS:

(1) ASSUME AS MANY FAMILY WORKERS OF EACH OF THE 3 KINDS LISTED ABOVE AS RURAL FARM FAMILIES IN THE AREA ON DECEMBER 1, 1942.

(2) MULTIPLY THE WORKER EQUIVALENTS FOR THE MONTH INVOLVED (1.8 FOR MAY, JUNE, JULY, AUGUST: FOR ALL OTHERS IN THIS CASE) BY THE HOURS PER DAY AVAILABLE FOR FIELD WORK. IT WAS ASSUMED THAT 8 HOURS WOULD BE AVAILABLE FOR FIELD WORK PER DAY DURING JANUARY, FEBRUARY, NOVEMBER, AND DECEMBER; THAT 10 HOURS WOULD BE AVAILABLE PER DAY DURING MARCH, APRIL, MAY, AUGUST, SEPTEMBER, OCTOBER; AND THAT 12 HOURS WOULD BE AVAILABLE DURING JUNE AND JULY.

(3) MULTIPLY THE RESULT OF (2) BY 26 DAYS TO DETERMINE THE LABOR POTENTIALLY AVAILABLE WITHOUT WEATHER INTERFERENCE. THIS AMOUNT OF LABOR WOULD BE AVAILABLE IF EVERY DAY IN THE MONTH EXCEPT SUNDAY COULD BE USED FOR FIELD WORK. FOR THIS ANALYSIS IT WAS ASSUMED THAT EVERY MONTH HAS 30 DAYS.

(4) MULTIPLY THE RESULT OF (3) BY THE PROPORTION OF THE 26 DAYS AVAILABLE FOR FIELD WORK IN THE MONTH INVOLVED TO GET THE TOTAL LABOR AVAILABLE FOR FARM WORK WITH WEATHER INTERFERENCE.

MANPOWER IN FARM FAMILIES INTERVIEWED

Men were classified as potentially available if under 60 years of age, in good health, and otherwise able to perform the types of skill common to the area. The heads of farm families not available for work outside the area were grouped into two classes; first, those 60 years old or over, ill or otherwise unable to take the responsibility of a war job, and second, those already working at a war job and living at home or boarding away from home. These war jobs included mining, timber operations, or work in adjacent industrial plants, such as the brick plants of Carter County. Where the head of a family held a war job during the latter half of 1942 and seemed likely to keep it in 1943 he was considered not available. Similarly, farm operations totaling 12 or more war units were classified as a war job.

In addition to the classifications set up in the survey to determine availability and unavailability the heads of families have also been classified according to the amount of productive farm work per family, as indicated by war units. It is doubtful whether heads of families with fewer than 8 war units could contribute as much to the war by production on their farms, as they could by doing other work. To a lesser extent this is also indicated for workers on farms with 8 to 12 war units (group II), although, in any recruitment program, available workers on the least productive farms should be approached first. The heads of families with 12 or more war units (group III), however, would probably contribute as much or more to the war in 1943 by production on their own farms than they could elswhere. They are now contributing significantly to production of food for sale but some persons from these farms might be available for other work during slack seasons.

If less than 12 war units per family are considered to represent inadequate contribution to farm production during the war emergency, 42 percent of the 359 heads of families would be available for war work away from home. However, if operations of less than 8 war units be so considered, 35 percent of the heads were available (table 19).

Table 19.—Percentage distribution of 359 farm families interviewed, by availability of head for war work and by war unit groups; selected magisterial districts in 5 counties, Eastern Kentucky, 1942

War unit group	Percentage distribution		
	All families	Families with heads available	Families with heads not available
Total	100.0	41.5	58.5
I	80.3	35.4	44.9
II	12.2	6.1	6.1
III	7.5	0.0	7.5

HOURS OF FARM LABOR REQUIRED TO MEET 1943 FOOD PRODUCTION GOALS AND AMOUNT AVAILABLE, 33 EASTERN KENTUCKY COUNTIES

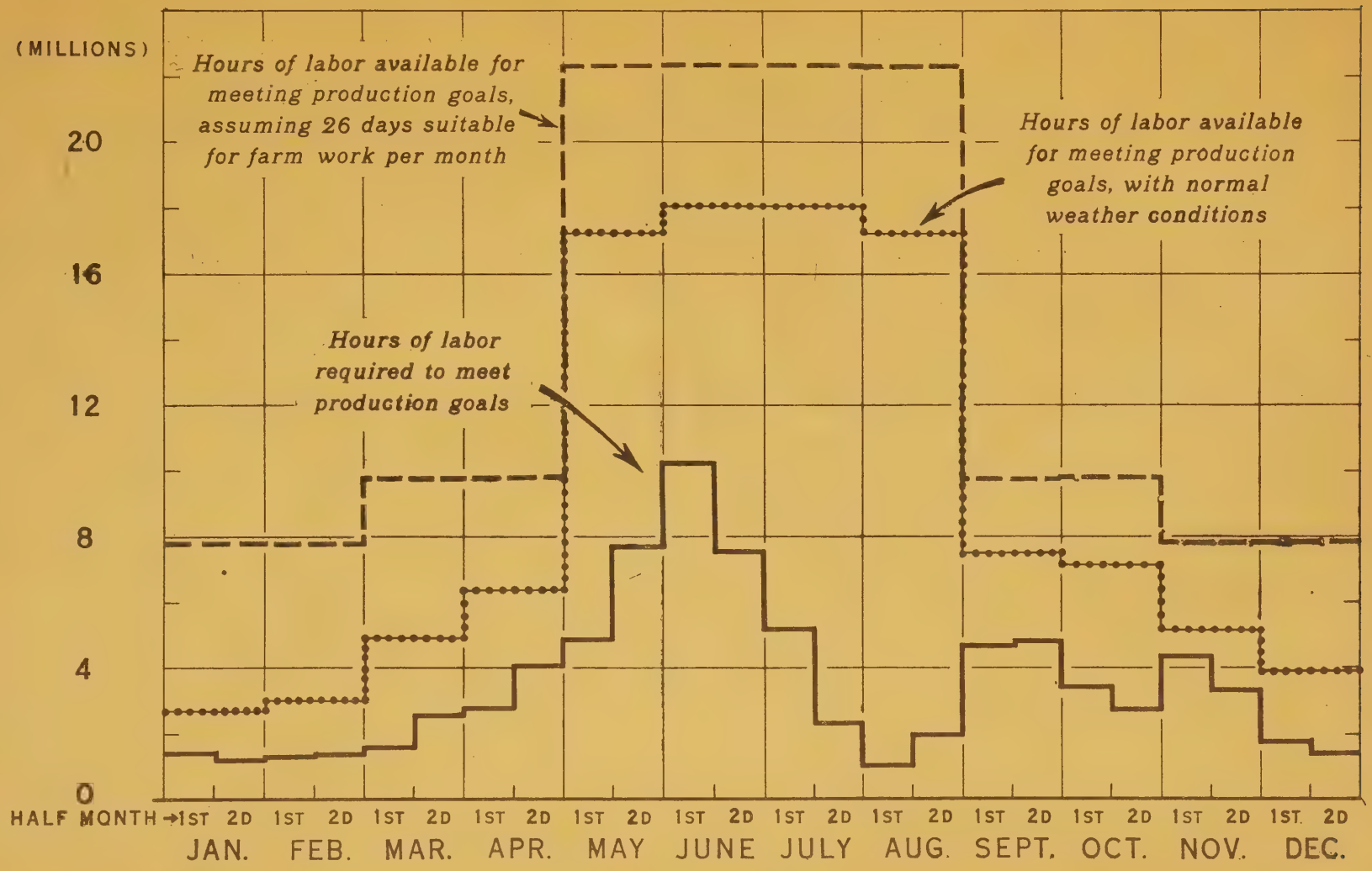

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FIGURE 9

The proportion of family heads available for war work varied among the war unit groups and the selected districts of the 5 counties (table 20). More group II than group I family heads are available, 50 percent in contrast to 44 percent, apparently because more family heads in group I were handicapped. For groups I and II combined, 46 percent were available.

Within the different districts, from one-fourth to over one-half of the family heads on farms with less than 8 war units were available for war work. The proportion available was lowest in the Carter district (23 percent) and highest in the Clinton (55 percent). The proportion of family heads available in the Carter district was low, principally because half - 51 percent - were already employed in war jobs. Another factor contributing to the low availability of group I family heads in the Carter district is that it is located closer to defense industry centers. This has made it easier for workers to leave the area. Only 12 percent of the group I family heads in the Clinton and Owsley districts already had war jobs, principally because of a lack of nearby employment opportunities. These two counties also had the largest proportions of unavailability due to handicaps, chief of which was old age.

Other things being equal, apparently the Carter district would be the least suitable of the 5 areas for recruiting family heads. More prospective workers would be found in the other areas where a higher proportion of the family heads are available. The range in the proportion of family heads available in the other areas is not great.

The availability of family heads for war work varied not only with the number of war units per family, and among the 5 areas, but it varied also with tenure classification. This classification has been described on page 16. In war unit group I, 67 percent of the heads were operators, 20 per percent were croppers and 13 percent were country residents. In group I also, croppers were relatively more numerous among employable heads of families and among heads not available because of war jobs, than they were among handicapped family heads (table 21).[18] Country residents were over-represented among those not employable because of war jobs, and operators were over-represented among handicapped family heads. The cropper group, by the availability criteria, was slightly more available than either the operator or country resident groups (table 47). Country residents surveyed usually had enough agricultural enterprises to equal 1 war unit. There were no croppers or country residents in war unit groups II and III.

18/ DATA OBTAINED FROM LOCAL INFORMANTS FOR ALL PERSONS IN THE SELECTED MAGISTERIAL DISTRICTS INCLUDED INFORMATION ON THE PRESENT MAJOR OCCUPATION OF EACH INDIVIDUAL 14 YEARS OF AGE AND OVER. TWO-THIRDS OF ALL MALE HEADS UNDER 60 HAD FARMING AS THEIR MAJOR OCCUPATION IN THE SENSE THAT THEY WERE CURRENTLY DEVOTING MORE TIME TO OPERATING THEIR OWN FARMS THAN TO ANY OTHER JOB (TABLE 46). MANY OF THOSE WHO DID NOT HAVE FARMING AS A MAJOR OCCUPATION DID LIVE ON A FARM WHICH THEY OWNED OR RENTED. SOME UNDERSTANDING OF THE EXTENT TO WHICH HEADS WERE CURRENTLY ENGAGED IN TWO OR MORE OCCUPATIONS IS PROVIDED BY THE DATA FOR THE MARTIN DISTRICT. OF THE 88 MALE HEADS UNDER 60, SUPPLEMENTARY OCCUPATIONS WERE REPORTED FOR 33 PERCENT. THE USUAL COMBINATION WAS FARMING AND SUCH WORK AS MINING, ROAD WORK, LOGGING, WPA, OR FARM LABOR.

Table 20.- Distribution of family heads in war unit groups I and II by availability of family head for war work; selected magisterial districts in 5 countie Eastern Kentucky, December 1, 1942 1/

County and district	Total		Availability of family head		
			Available for war work	Not available for war work	
				Already have war jobs	Handicapped
	Number	Percent	Percent	Percent	Percent
Total All Families With Less Than 12 War Units					
Carter #6	97	100	29	47	24
Clinton #3	47	100	57	11	32
Leslie #3	36	100	45	36	19
Martin #6	60	100	50	23	27
Owsley #2	92	100	52	10	38
Average, five districts	332	100	46 a/	28	26
Group I - Families With Less Than 8 War Units					
Carter #6	77	100	23	51	26
Clinton #3	41	100	56	12	32
Leslie #3	35	100	46	34	20
Martin #6	59	100	49	24	27
Owsley #2	76	100	47	12	41
Average, five districts	288	100	44	28	28
Group II - Families With 8-11.9 War Units					
Carter #6	20	100	50	35	15
Clinton #3	6	b/	b/	---	b/
Leslie #3	1	b/	b/	b/	---
Martin #6	1	b/	b/	---	---
Owsley #2	16	100	75	---	25
Average, five districts	44	100	50	38	12

1/ THERE WERE 27 CASES IN GROUP III; HEADS OF FAMILIES OPERATING THESE FARMS WERE NOT CONSIDERED AVAILABLE INASMUCH AS THEIR FARMING CONSTITUTES A WAR JOB.

A/ THIS IS 46 PERCENT OF ALL FAMILIES IN GROUP I AND II. AS A PERCENTAGE OF ALL FAMILIES IN THE 3 WAR UNIT GROUPS IT IS 41.5.

B/ PERCENTAGES NOT COMPUTED FOR LESS THAN 10 CASES.

Table 21.-Distribution of family heads in war unit group I by tenure and availability for war work; selected magisterial districts in 5 counties in Eastern Kentucky, December 1, 1942

Availability of family heads for war work	All families		Tenure		
	Number	Percent	Operator Percent	Cropper Percent	Resident Percent
Available	122	100	64	25	11
Not available - handicapped	87	100	75	14	11
Not available - have war jobs	79	100	61	23	16
Total	288	100	67	20	13

Available Workers per Farm Family Interviewed

The family heads were classified as available for war work without regard to the availability of other persons in the family. Most families, however, included other workers who might be considered available in case a maximum utilization of all the potential labor force were undertaken. In the region under survey the various members of the family, of working age, usually participate in the farm work; the women and children assisting particularly during the periods of peak labor demands.

In order to calculate the potential labor contribution that farm families in the area could make to the war effort in terms of manpower per family, man equivalent values were assigned to each person, principally on the basis of age and sex. Children under sixteen were considered available only when parental supervision could be provided and only for summer months when schools are not in session (table 48).

Manpower per Family for Farm Work

On the basis of the non-equivalent values, the families in work unit group I were analyzed to learn their potential manpower for war work on farms in an all-out war effort. It is recognized that many members of farm families can work more readily in agriculture than in nonfarm employment. This is true particularly of persons under 16 because of minimum age employment laws in many states. Qualifications are necessary, however, boys and girls on farms usually help only before and after school and when school is not in session. Furthermore, women between 16 and 50 are usually not so effective in agriculture as in industry. It is not generally

possible for them to perform full-time farm work because of household duties and because they cannot perform all kinds of farm jobs, but many can perform tasks designed for them in industry and are able to work full time on that basis. These considerations have affected the computation of man-equivalent: for war work.

For families whose heads were classified as available for farm work, the number of man equivalent units for farm work was almost three times as great as for families of the heads not available - 1.9 in contrast to 0.7 (table 22). In the latter families, the nonavailability of the head reduced the family total.

Table 22.-Average man equivalent units per family for farm work by availability of heads for war work; 288 sample farms with less than 8 war units; selected districts in 5 counties; Eastern Kentucky, December 1, 1942

County and district	Average man equivalent units for farm work					
	Heads available			Heads not available		
	Total	Male	Female	Total	Male	Female
All districts	1.9	1.2	.7	.7	.3	.4
Carter #6	1.6	1.2	.4	.6	.3	.3
Clinton #3	2.0	1.4	.6	.5	.2	.3
Leslie #3	1.8	1.1	.7	.9	.5	.4
Martin #6	2.1	1.3	.8	.9	.3	.6
Owsley #2	1.8	1.2	.6	.4	.2	.2

Two-thirds of the families whose heads were available had a potential labor supply for farm work of between 1 and 1.9 man equivalent units (table 23). The remaining one-third had 2 or more man equivalent units. Conversely, three-fourths of the families whose heads were not available had less than one man equivalent of potential labor force for farm work. The presence of potential farm workers in the families of most heads classified as available for war work suggests that many of these families might improve their level of living and contribute more to the war effort if they were given opportunity to locate on more productive farms.

Table 23.-Distribution of families with less than 8 war units by number of man equivalent units and by availability of all family members for farm work; selected districts in 5 countries combined; Eastern Kentucky, December 1, 1942

Number of man equivalent units for farm work	Families			
	Heads available		Heads not available	
	Number	Percent	Number	Percent
Total	122	100	166	100
0.0 to 0.9	0	0	123	74
1.0 to 1.9	82	67	30	18
2.0 to 2.9	33	27	10	6
3.0 and over	7	6	3	2

Manpower per Family for Industrial Work

The families in group I were also analyzed as to their potential manpower for industrial war work. The considerations in the preceding section on rural women's and children's potentiality for industrial labor, enter here. Furthermore, in most families there were members other than heads who could work in industry. More of these persons were in the homes of heads classified as available than in the homes of heads classified as nonavailable. Of more importance, however, is the relative immobility of the head where handicapped by age or illness, making it difficult for other family members to leave. Thus the number of man equivalent units for industry per family with available heads was more than three times that for families whose heads were not available, 1.7 in contrast to 0.5 (table 24). The difference is owing almost entirely to the fact that heads in the latter homes were unable to do industrial work or were already employed in war work.

Table 24.-Average man equivalent units per family for industrial work by availability of heads for war work; 288 farm families with less than 8 war units; selected districts in 5 counties, Eastern Kentucky, December 1, 1942

County and district	Average man equivalent units					
	Heads available			Heads not available		
	Total	Male	Female	Total	Male	Female
All districts	1.7	1.2	.5	.5	.1	.4
Carter #6	1.7	1.2	.5	.5	.2	.3
Clinton #3	1.5	1.2	.3	.6	.1	.5
Leslie #3	1.6	1.2	.4	.5	.1	.4
Martin #6	2.1	1.3	.8	.7	.2	.5
Owsley #2	1.5	1.1	.4	.4	.1	.3

Table 25.-Distribution of families with less than 8 war units by number of man equivalent units and availability of all family members for industrial work; selected districts in 5 sample counties; Eastern Kentucky, December 1, 1942

Number of man equivalent units for industrial work:	Families			
	Heads available		Heads not available	
	Number	Percent	Number	Percent
Total	122	100	166	100
0.0 to 0.9	0	0	111	67
1.0 to 1.9	63	52	32	19
2.0 to 2.9	40	33	20	12
3.0 and over	19	15	3	2

Fifty-two percent of the families whose heads were available had a potential labor supply for industrial work between 1 and 1.9 man equivalent units. Only 19 percent of the families whose heads were not available had that many workers available for industry. One-third of the families with available heads had between two and three man equivalent units as compared to about one-ninth for families with heads not available (table 25).

Other sections have shown the approximate productivity of the labor of the 350 families interviewed in present farming operations.19/ This section has provided an approximate comparison of the labor requirements of the farm with the family labor available and has shown that many families have manpower which, relative to other war employment opportunities, is unproductively used for all or part of the year. This available labor has been related to the size of the farm business, to income, to tenure, and to the manpower per family.

In developing the estimates of the manpower in Eastern Kentucky available for war work, the data obtained through local informants were used since they applied to all persons in the selected magisterial districts.

19/ AS COMPARED WITH THE $109 GROSS CASH FARM INCOME OF THESE FAMILIES IN 1942, ALL FARMS IN KENTUCKY AVERAGED $761 CASH INCOME FROM FARM MARKETINGS IN 1941 AND ALL FARMS IN THE UNITED STATES AVERAGED $1,844. SEE U. S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL STATISTICS, 1942, TABLES 734 AND 739.

ESTIMATED NUMBER OF AVAILABLE WORKERS IN EASTERN KENTUCKY

Despite the substantial decrease in the rural-farm population of Eastern Kentucky since the 1940 U. S. Census, a large number of available workers remained on December 1, 1942. Since in wartime the tendency is to employ certain age, sex, and marital status groups not normally included to any extent in the labor force, the estimated number of potential workers is mainly dependent upon the criteria of employability in relation to the number and characteristics of the population. For this study, two estimates - a low and a high - were made. The low estimate of 63,000 available workers in the rural-farm population of the 33 Eastern Kentucky counties on December 1, 1942, includes only those groups usually a part of the labor force (table 26).[20] The high estimate of 98,000 available workers includes groups likely to be brought into the labor force by the wartime emergency demand for manpower.[21]

It must be recognized that the present situation in Eastern Kentucky is one of rapid change and these estimates must be qualified accordingly when being used during 1943. To the extent that male heads of families working at war jobs on December 1, 1942, return in the spring to make a crop, the number of available workers will increase. If the present rate of departure continues, the number available will constantly become smaller. It should also be remembered that as the number of workers decreases, it becomes increasingly difficult to obtain the remaining workers as they are the most likely to have the ties of family or land, or may be reluctant to make a change in their present way of living; or they may be females who have not previously been gainfully employed.

Although all the workers estimated to be available might produce more at war work, the number who would voluntarily take or who would seek war jobs would be influenced by such factors as were suggested in the introduction -- size of family, availability of housing for the family at the place of employment, family and property ties, and the possibilities of arranging for the disposition or care of property, the conditions of the employment opportunity, including wages, and attitudes of the workers.

The types of war jobs, either in agriculture or industry, which these workers are interested in or capable of doing vary greatly. Some of the reasons for the variations trace to the characteristics of the workers, for example the age or sex, as discussed in the explanation of the low and high estimates. Field enumerators received the impression that the workers are usually more interested in industrial than in agricultural work. Many,

20/ ALTHOUGH THE POPULATION OF THE SELECTED MAGISTERIAL DISTRICTS INCLUDES SOME NONFARM PERSONS, THEY WERE ALMOST ENTIRELY OPEN-COUNTRY DWELLERS AND THE APPLICATION OF RATIOS FROM THE TOTAL POPULATION OF THE SELECTED DISTRICTS TO THE RURAL-FARM POPULATION OF THE ENTIRE AREA WAS CONSIDERED TO BE A VALID PROCEDURE.

21/ LOW AND HIGH ESTIMATES OF THE NUMBER OF AVAILABLE WORKERS BY GROUPS OF COUNTIES ARE PRESENTED IN TABLE 49.

however, are available only for part of the year because of school attendance or work on their own farms or in their own homes, and consequently could be recruited for seasonal work in agriculture.

Table 26.-Low and high estimates[1/] of number of available[2/] workers aged 15 to 59 in the rural-farm population, by sex and family status; 33 Eastern Kentucky counties, December 1, 1942

Sex and family status	Low	High
Total: Men and women	63,000	98,000
Men: Total	47,000	56,000
Heads of households	28,000	31,000
Other men	19,000	25,000
Women: Total	16,000	42,000
Heads, no children under 10	0	2,000
Wives, no children under 10	0	17,000
Other women	16,000	23,000

1/ ESTIMATES WERE COMPUTED BY EXTENSION OF RATIOS FOR THE 5 SELECTED MAGISTERIAL DISTRICTS TO THE 5 RESPECTIVE GROUPS OF COUNTIES; AND FOR THE 33 COUNTIES WERE ROUNDED TO THE NEAREST THOUSAND.

2/ EXCLUDES WORKERS CLASSIFIED AS PRODUCTIVELY EMPLOYED AT THE TIME OF THE SURVEY.

Table 27.-Percent of male heads aged 15 to 59 by reported obstacles to taking other jobs; selected magisterial districts in 5 counties, Eastern Kentucky, December 1, 1942

County and district	Total		No obstacle	Age	Youth	Health	Other 1/
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Carter #5	302	100.0	34.1	5.0	0.3	5.3	55.3
Clinton #3	257	100.0	60.7	1.9	0.0	3.5	33.9
Leslie #3	453	100.0	57.2	2.4	0.0	2.6	37.8
Martin #6	88	100.0	40.9	2.3	0.0	17.0	39.8
Owsley #2	274	100.0	62.0	7.3	0.0	11.3	19.4

1/ INCLUDES HEADS PRODUCTIVELY EMPLOYED AT TIME OF SURVEY.

The Low Estimate

For each person, aged 15 and over, listed in the interview with the neighborhood informant, any obstacles were reported which might stand in the way of taking another job. In addition to current productive employment at a farm or non-farm job, the reported obstacles included old age, youth, school attendance, duties as a wife and mother, aged parents needing help, physical or mental disabilities, alcoholism, and attitude. It was assumed that persons under 15 and those who have reached 60 years or over should not be included in the estimates and that all housewives, housekeepers, and female heads of families should be classified as having obstacles which would hinder their leaving for work opportunities. The remainder of the selected magisterial district population, aged 15 through 59 were classified as available if no obstacles were reported to changing to another job.

The proportion of male heads under 60 with no reported obstacles to taking another job ranged from 34 percent in the Carter County district, where many of the men were currently employed in war jobs - to 62 percent in the Owsley district (table 27). In each of the districts a larger proportion of the male nonheads than of the male heads had no reported obstacles, the proportion with no special reason for not changing from what they are now doing ranged from 48 percent of the male nonheads in the Martin County district to 77 percent of those in the Clinton district (table 28). Among the female nonheads, from 43 percent in Martin to 66 percent in Clinton had no obstacles reported.

To compute the low estimate of available workers in Eastern Kentucky, the above ratios for the 5 magisterial districts were extended to the 5

respective groups of counties.22/ The low estimate of 63,000 workers aged 15 to 59 who have no reported obstacles to taking another job, is made up of the following:

Men, heads of households	28,000
Other men	19,000
Women, neither wives nor heads of households	16,000
Total	63,000

Table 28.-Percent of persons aged 15 to 59, other than heads of households, or wives, with no reported obstacles to taking other jobs, by sex; selected magisterial districts in 5 counties, Eastern Kentucky, December 1, 1942.

County and district	Males			Females		
	Total		No obstacles	Total		No obstacles
	Number	Percent	Percent	Number	Percent	Percent
Carter #6	221	100.0	52.9	159	100.0	48.4
Clinton #3	144	100.0	77.1	130	100.0	66.2
Leslie #3	247	100.0	64.8	256	100.0	62.1
Martin #6	50	100.0	48.0	53	100.0	43.4
Owsley #2	138	100.0	63.0	146	100.0	60.3

The High Estimate

The high estimate, which also includes only persons 15 through 59, assumes that the obstacles of workers, other than those reported as currently employed full time at a productive job, could be overcome if the obstacle was not a physical or mental handicap. Thus a 15-year-old with youth and school attendance as obstacles might be considered available for a part of the year for such a task as seasonal farm work. Or, a man with aged parents as an obstacle might be assumed to be able to make some arrangements for their care so that he could leave. Wives and female heads aged 15 to 59 and without children under 10 were assumed to be available in making the high estimate. 23/

22/ RATIOS BASED UPON THE 359 FAMILIES BY INDIVIDUAL INTERVIEWS SUBSTANTIATE THE RATIOS BASED UPON THE INFORMATION PROVIDED BY NEIGHBORHOOD INFORMANTS.

23/ THE PERCENTAGES OF FEMALE HEADS AGED 15 TO 59 WITH NO CHILDREN UNDER 10 WERE 71.4, 40.0, 31.0, 33.3, AND 43.8, RESPECTIVELY IN THE CARTER, CLINTON, LESLIE, MARTIN, AND OWSLEY DISTRICTS AND THE PERCENTAGES OF WIVES AGED 15 TO 59 WITH NO CHILDREN UNDER 10 WERE 27.8, 30.2, 21.3, 20.8, AND 39.6, IN THE SAME DISTRICTS.

In the selected magisterial districts the proportion of male heads available for employment at other than their present work, if obstacles could be overcome, ranged from 40 percent in the Carter district to 73 and 74 percent in the Owsley and Clinton districts, respectively (table 50). Just as in the case of the low estimate, a larger proportion of the male nonheads than of the heads were classified as available. From 73 percent of the male nonheads in the Leslie district to 89 percent of those in Clinton were classed as available. Between 77 and 85 percent of the female nonheads in each district were classed as available.

The ratios of available workers for the 5 magisterial districts, when extended to the respective groups of counties, resulted in the high estimate of 98,000 available workers. This estimate is composed of the following:

Men, heads of households	31,000 24/
Other men	25,000
Wives, no children under 10	17,000
Women, heads of households, no children under 10	2,000
Other women	23,000
Total	98,000

Age of Workers in the Low Estimate

It has been previously indicated (p. 47) that only persons aged 15 through 59 were included as available if no obstacles were reported to

Table 29.-Male heads under 60 with no reported obstacles to taking other jobs, by age groups; selected magisterial districts in 5 counties; Eastern Kentucky, December 1, 1942

County and district	Total		Age		
	Number	Percent	Under 20 Percent	20-44 Percent	45-59 Percent
Carter #6	103	100.0	0.0	79.6	20.4
Clinton #3	156	100.0	0.6	68.6	30.8
Leslie #3	259	100.0	0.4	76.8	22.8
Martin #6	36	100.0	0.0	75.0	25.0
Owsley #2	170	100.0	0.0	71.2	28.8

24/ ESTIMATES BASED UPON 1940 CENSUS DATA AS OF APRIL 1, 1940, INDICATED 21,800 FARM FAMILIES POTENTIALLY AVAILABLE FOR MORE PRODUCTIVE WORK, AS COMPARED WITH THIS STUDY'S LOW ESTIMATE OF 28,000 AND THE HIGH ESTIMATE OF 31,000 MEN WHO ARE HEADS OF FAMILIES AND AVAILABLE AS OF DECEMBER 1, 1942.

their changing to a war job.25/ The age composition of the available workers within these age limits has implications as to the probable willingness of these workers to change and their ease of adjustment in a new job.

The male heads considered available for outside war work were predominantly in what are generally considered the physically most productive years, since the proportion aged 20 to 44 ranged from 69 percent in the Clinton district to 80 percent in the Carter district (table 29). Practically all the remaining heads were aged 45 to 59. Close to two-thirds of the available married men were aged 18 to 37, the age group most subject to military service.

Only about 1 percent of the available male nonheads were aged 45 or over (table 30). These prospective workers are predominantly a youthful group, since the majority were under 20, the proportions ranging from two-thirds to nearly four-fifths. In the Owsley district, 10 percent were only 15 years of age. From one-fourth to more than one-third were aged 20 to 44. The female nonheads, like the male nonheads, were also predominantly a youthful group.

Land and Family Ties of Male Heads Available for War Work - Low Estimate

The willingness of a family head to leave his farm will be conditioned by many factors. One consideration will be his estimate of how long the new job will last. About one-fourth of the persons leaving in 1942 from three of the districts - Carter, Leslie, and Owsley - were family heads. In the Clinton and Martin districts, a smaller percentage of emigrants were family heads. Temporary jobs can be taken by husbands and fathers who board away from home. In all but the Carter district there were probably some men who still would go from their families temporarily. Should jobs appear to become more permanent, however, the supply of family heads away from their families would prove to be unstable, and the question of moving family groups would become important.

In addition, another consideration will be whether or not a family head has real property which needs to be cared for or disposed of. Housing facilities at the place of work is another factor. This is especially influential in the case of large families. Then there is the immediate cost of moving a family, and the cost of living on purchased rather than home-produced food. Many men have taken jobs without moving their families, but this situation gives rise to problems such as absence from work in order to look after the family's welfare and to advise on farm

25/ PERSONS AGED 14 WERE INCLUDED IN THE LABOR FORCE BY THE 1940 U.S. CENSUS, BUT WERE EXCLUDED IN THIS STUDY BECAUSE CENSUS REPORTS DO NOT INCLUDE THE NUMBER OF PERSONS THIS AGE IN THE RURAL-FARM POPULATION BY MAGISTERIAL DISTRICTS OR BY COUNTIES, AND IT WOULD THEREFORE BE DIFFICULT TO ACCURATELY ESTIMATE THE CHANGE IN NUMBERS SINCE APRIL 1, 1940, AND CONSEQUENTLY DIFFICULT TO ESTIMATE THE NUMBER NOW RESIDENT IN EASTERN KENTUCKY.

Table 30. - Males and females under 60, other than heads of households and wives, with no reported obstacles to taking other jobs, by age groups; five selected magisterial districts in five counties; Eastern Kentucky, December 1, 1942

County and District	Total		Age				
			15	16-17	18-19	20-44	45-59
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Men							
Carter #6	117	100.0	2.6	31.6	30.8	34.2	0.8
Clinton #3	111	100.0	9.9	31.5	20.7	37.0	0.9
Leslie #3	160	100.0	2.5	33.8	41.9	21.2	0.6
Martin #6	24	100.0	0.0	29.2	37.5	33.3	0.0
Owsley #2	87	100.0	10.3	49.5	16.1	24.1	0.0
Women							
Carter #6	77	100.0	3.9	33.8	24.7	37.6	0.0
Clinton #3	86	100.0	3.5	20.9	36.0	37.3	2.3
Leslie #3	159	100.0	1.3	39.0	27.7	31.4	0.6
Martin #6	23	100.0	0.0	34.8	34.8	26.1	4.3
Owsley #2	88	100.0	3.4	46.6	29.5	20.5	0.0

operations, and involves considerable expense to the worker. The separation of the heads from the rest of the members is, of course, not satisfactory to the families concerned.

At least one in three of the available male heads would have to make arrangements for their land if they were recruited for a war job as their major occupation is now operating a farm which they own. Some of the other available heads undoubtedly own land, but the percentage is not known since the present major occupation was reported as other than farm owner.[26] Thus, the availability of more than 9,000 men is dependent in part upon the strength of these property ties (table 31). Many of the 9,000 might do as some of their neighbors have already done during the past 2 years - leave the farm to be operated by the wife and children or lease or sell the farm or abandon it for the time being. Others might welcome the assistance of some public agency in arranging for the care of their land, although very few at the time of study expected to leave farm permanently. It was frequently observed during the survey that farm renters and croppers were more interested in war jobs than were owners, while some owners commented that if they only knew what to do with their land and buildings while they were away they would leave with their families for work which would contribute more to winning the war.

Should none of the available farm owners be willing to leave their farms, the number of available heads would be reduced to two-thirds of the "low" estimate, or to 18,000. It is unlikely, of course, that this would be an obstacle to the movement of all in this group.

Size of family might be a handicap to taking a job for between 50 and 60 percent of all the available heads if it is assumed that a family of 5 or more persons would have more difficulty in moving, than smaller families. It is estimated that about 16,000 available men are heads of families of 5 or more persons.[27] The problem of moving and housing families of these men - over half the available heads - would be most difficult. On the other hand, there is, of course, the frequent presence of workers other than the head in these families.

If to the minimum of 9,000 farm owners, part of whom have large families, are added the 11,000 other heads who have households of 5 or more persons, some 20,000 of the 28,000 available male heads can be assumed to have either land or family ties or both[28] which might limit the possibility of their changing to other work, although not reported by neighborhood informants as constituting obstacles.

26/ AMONG THE 122 AVAILABLE HEADS OF FAMILIES WITH LESS THAN 8 WAR UNITS IN THE GROUP OF 359 INTERVIEWED, 35 PERCENT WERE FARM OWNERS AS COMPARED WITH 34 PERCENT OF THE 28,000 HEADS IN THE LOW ESTIMATE OF AVAILABILITY BASED UPON THE DATA OBTAINED THROUGH LOCAL INFORMANTS.

27/ THE NUMBER OF CASES IN MARTIN COUNTY WAS TOO SMALL TO PERMIT AN EXTENSION OF AN ESTIMATE TO THE SURROUNDING GROUP OF COUNTIES. THE ESTIMATE GIVEN ABOVE ASSUMES THAT HOUSEHOLDS OF 5 OR MORE PERSONS WERE TO BE FOUND AMONG FARM OWNERS IN THE MARTIN GROUP OF COUNTIES IN THE SAME PROPORTION AS IN THE OTHER 4 GROUPS.

28/ ESTIMATES ARE BASED UPON PERCENTAGES FOR THE SELECTED DISTRICTS AS SHOWN IN TABLE 31.

Table 31. - Estimated number of available 1/ male heads, aged 15 - 59 in the rural-farm population by farm ownership and size of household; 33 Eastern Kentucky counties, December 1, 1942

Farm ownership and size of household	Total 33 counties	Carter group 8 counties	Clinton group 8 counties	Leslie group 9 counties	Martin group 4 counties	Owsley group 8 counties
Total	28,000	3,100	4,600	10,800	4,600	4,800
Farm owners 2/	9,400	1,200	1,500	3,000	1,100	2,600
Households of 1 - 4 persons	3,900 a/	500	900	1,000	b/	1,500
Households of 5 or more persons	4,400 a/	700	600	2,000	b/	1,100
Other than farm owner	18,600	1,900	3,100	7,800	3,500	2,300
Households of 1 - 4 persons	7,400	900	1,700	2,900	800	1,100
Households of 5 or more persons	11,200	1,000	1,400	4,900	2,700	1,200

A/ EXCLUSIVE OF THE MARTIN GROUP.
B/ NUMBER OF AVAILABLE FARM OWNERS IN THE SELECTED MAGISTERIAL DISTRICT WERE TOO FEW TO PROVIDE A RELIABLE BASIS FOR EXTENSION TO THE GROUP OF COUNTIES.
1/ BASED UPON LOW ESTIMATE OF AVAILABILITY, I.E., HEADS FOR WHOM THERE WERE NO REPORTED OBSTACLES TO MOVING, ROUNDED TO THE NEAREST HUNDRED.
2/ FARM OWNERS WERE THOSE HEADS WHOSE PRESENT MAJOR OCCUPATION WAS OPERATING A FARM WHICH THEY OWNED; THE DATA DO NOT INCLUDE ALL HEADS WHO OWNED LAND.

Comparative Age and Sex Composition of Workers in Low and High Estimates

Although available men out number women in both estimates, females comprise only 25 percent of the low but 43 percent of the high estimate. The higher percentage is accounted for by the inclusion of wives and female heads with no children under 10.

The age composition of the high estimate differs chiefly from the low estimate in the large proportion of young workers among the male and female nonheads. Among the male nonheads, 15 year olds comprised about 12 percent in all districts but Martin where they were 21 percent of such available workers (table 52). The percentage of 15-year-old girls among female nonheads ranged from 7 percent in the Clinton to 16 percent in the Owsley district.

It should be pointed out that a considerable number of the workers in the high estimate will not be available for work the year round unless they remain out of school. Also, many of them would need special permits to do certain types of work in some States as they are under 18 years of age.

Education and Experience of the Workers

Formal schooling of the majority of the rural-farm population of working age in Eastern Kentucky is quite limited. Data on education of persons in the labor force were obtained in only one of the selected magisterial districts. However, the 1940 U. S. Census revealed that in the counties including these districts, the percentage of the rural-farm population 25 years of age and over who had completed more than 8 years of school varied only from 6 percent in Martin to 11 percent in Owsley County (table 32). In every county but Clinton the majority had less than 7 years of schooling, the percentages ranging from 45 in Clinton to 68 in Martin. The median years of school completed ranged from 5.1 in Martin to 7.2 in Clinton.

It is evident that the limited education of many of the available workers will handicap them for many types of employment and may impede their adjustment to new situations.

In the Martin district, 45 percent of the males aged 15 to 59, had worked somewhere outside of the home county (table 33). In Carter and Leslie only 14 percent had worked away. These data indicate that in some parts of Eastern Kentucky, over 40 percent of the resident men have broken the home tie enough to go away for work at some previous time, usually at nonagricultural work. In the isolated sections represented by

the Leslie district, however, relatively few men have been outside to work, and the first adjustment to conditions of working and living elsewhere still awaits them.

The farm work skills of persons in the surveyed districts did not include machine operation. In none of the 5 areas, were more than 40 percent of the men between the ages of 15 to 59 reported to have driven cars (table 34). In the Carter and Leslie districts, about 14 percent of the resident males had driven. Among family heads in the Clinton and Martin districts, however, nearly half had driven cars.

Interviewers learned that nearly all boys and men, as well as girls and women, could milk cows, but milking was traditionally women's work in most areas. Almost none of these farm people were experienced in milking more than a very few cows. All of the boys and men were experienced in harnessing and hitching work animals, although seldom in teams of two or more. The number of men who had operated tractors was negligible; most of them had operated mowing machines, but there was practically no experience with more complicated farming equipment. Both men and women were experienced in general farm work of the type found in Eastern Kentucky.

Table 32. - Percentage distribution of rural-farm population 25 years old and over by years of school completed; five counties in Eastern Kentucky, April 1, 1940 1/

Number of school years completed	Carter	Clinton	Leslie	Martin	Owsley
	Percent	Percent	Percent	Percent	Percent
Total	100.0	100.0	100.0	100.0	100.0
None	5.3	5.7	11.0	10.6	6.9
1 - 4 years	29.8	19.8	29.2	37.6	23.0
5 - 6 years	21.6	19.6	19.3	20.0	21.6
7 - 8 years	34.3	47.3	30.8	25.4	37.6
More than 8 years	9.0	7.6	9.7	6.4	10.9
Median years completed	6.4	7.2	6.0	5.1	6.8

1/ SOURCE: U. S. CENSUS.

Table 33. - Percent of males, age 15 - 59, who have previously worked outside the county, selected magisterial districts in five counties, Eastern Kentucky, December 1, 1942

County and district	All males 15-59			Heads			Other males		
	Total		Have worked outside	Total		Have worked outside	Total		Have worked outside
	Number	Percent	Percent	Number	Percent	Percent	Number	Percent	Percent
Carter #6	523	100.0	14.1	302	100.0	20.2	221	100.0	5.9
Clinton #3	401	100.0	21.7	257	100.0	28.8	144	100.0	9.0
Leslie #3	700	100.0	14.1	453	100.0	19.0	247	100.0	5.3
Martin #6	138	100.0	44.9	88	100.0	42.0	50	100.0	50.0
Owsley #2	412	100.0	35.0	274	100.0	44.2	138	100.0	16.7

Table 34. - Percent of males, aged 15-59, who have driven cars, selected magisterial districts in five counties, Eastern Kentucky, December 1, 1942

County and district	All males 15-59			Heads			Other males		
	Total		Have driven	Total		Have driven	Total		Have driven
	Number	Percent	Percent	Number	Percent	Percent	Number	Percent	Percent
Carter #6	523	100.0	14.7	302	100.0	18.5	221	100.0	9.5
Clinton #3	401	100.0	39.9	257	100.0	46.7	144	100.0	27.8
Leslie #3	700	100.0	13.7	453	100.0	16.1	247	100.0	9.3
Martin #6	138	100.0	36.2	88	100.0	42.0	50	100.0	26.0
Owsley #2	412	100.0	27.2	274	100.0	33.9	138	100.0	13.8

RECOMMENDATIONS

For fuller utilization of manpower in Eastern Kentucky available for war work, the following recommendations are made:

(1) Under-employed and unproductively employed workers in Eastern Kentucky who are likely to seek work elsewhere should be recruited for jobs in which they would be most effectively employed.

(2) Making job placement services accessible to all farm people who are interested in finding other employment would increase the proportion of the available workers who would enter war jobs.

(3) The recruitment and placement of seasonal workers for various areas of agricultural labor demand should be continued and expanded among farm families in the region.

(4) The recruitment and placement of year-around agricultural workers for other areas offers some possibilities, especially if combined with a training program, and if measures are taken to make farm work as attractive as industrial work.

(5) Vocational training for potential workers for agriculture and industry should be continued and expanded.

(6) Potential farm workers should be apprised in advance of the conditions of their prospective employment, including wages and perquisites, the kind and amount of work to be required, and the arrangements for the relocation of the family.

(7) Policy in recruitment and placement of workers from the area should be increasingly a matter of dealing with family groups rather than individuals. To the extent that family groups are broken by movement to jobs, the workers will prove unstable, working intermittently and interspersing periods at work with trips home.

(8) Prospective workers who wish to leave, but who have property, should be assisted in arranging rental or sale. This would encourage combination of vacated farms with other farms still operated.

(9) Families who can increase their war production by moving should be assisted with the costs of moving, if necessary.

(10) Efforts should be made to provide adequate housing at a reasonable rent at the scene of employment.

(11) To insure the stable adjustment of workers, provision should be made for an orientation and training period to assist in the adjustment to new ways of working and living which go with entering a war job in other areas.

(12) Efforts to assist farm people who move from Eastern Kentucky into war work should include consideration of the long-time welfare of the population in the area.

(13) Resurvey of the selected districts for information on later changes in the labor supply is desirable.

(14) Further study should be given to the question of future land use in rugged and infertile areas vacated during wartime emigration, and to the appropriate public policy toward such vacated land. A vitally important phase of this problem is the question of whether population will again accumulate on these relatively unproductive lands as it did in the early and middle thirties.

(15) Further study should be given to the problem of maintaining social services in unproductive areas in which there are or will probably be abnormal proportions of small children, handicapped persons, and aged people, left as a result of emigration of young adults and middle aged persons.

APPENDIX

Appendix Tables: Page

Table 35.- Distribution of population by residence, 33 counties in Eastern Kentucky, by county groups; U. S. Census, 1940

County group	Total	Urban	Rural nonfarm	Rural farm
Total (33 counties)	744,947	63,321	232,487	449,139
Carter (8 counties)	167,635	34,061	48,304	85,270
Clinton(4 counties)	84,511	6,154	18,907	59,450
Leslie (9 counties)	228,819	15,290	68,636	144,893
Martin (4 counties)	160,849	4,185	73,520	83,144
Owsley (8 counties)	103,133	3,631	23,120	76,382

Table 36.- Male population and percent change by age, selected magisterial districts in five counties, Eastern Kentucky; April 1, 1940 and December 1, 1942

Age	Male population										Percent change				
	Carter #6		Clinton #3		Leslie #3		Martin #6		Owsley #2		Carter #6	Clinton #3	Leslie #3	Martin #6	Owsley #2
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942					
Total	1,646	1,105	1,023	817	1,912	1,605	389	326	1,427	943	-32.9	-20.1	-16.1	-16.2	-33.9
Under 15 1/	662	440	402	370	887	802	195	173	546	374	-33.5	- 7.9	- 9.7	-11.1	-31.5
15 - 24	342	201	179	119	377	235	62	46	296	124	-41.2	-33.5	-37.7	-25.8	-58.1
25 - 34	184	115	136	60	239	152	43	22	173	68	-37.5	-55.9	-36.4	-48.8	-60.7
35 - 44	154	106	95	88	153	141	39	31	139	112	-31.2	- 7.4	- 7.8	-20.5	-19.4
45 - 54	121	87	85	73	107	122	27	27	94	88	-28.1	-14.1	14.0	0.0	- 6.4
55 - 64	94	67	68	56	74	75	10	10	87	84	-28.7	-17.6	1.4	0.0	- 3.4
65 and over	89	89	58	51	75	78	13	17	92	93	0.0	-12.1	4.0	30.8	1.1

1/ Since the sex of persons under 14 was not reported in the survey, males and females of this age were assumed to have the same rate of change.

Table 37.- Female population and percent change by age, selected magisterial districts in five counties, Eastern Kentucky; April 1, 1940 and December 1, 1942

Age	Female population										Percent change				
	Carter #6		Clinton #3		Leslie #3		Martin #6		Owsley #2		Carter #6	Clinton #3	Leslie #3	Martin #6	Owsley #2
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942					
Total	1,384	1,007	936	778	1,811	1,678	350	327	1,291	974	-27.2	-16.9	- 7.3	- 6.6	-24.6
Under 15 1/	566	377	346	319	881	794	164	146	472	323	-33.5	- 7.9	- 9.7	-11.1	-31.5
15 - 24	273	166	185	130	369	298	59	66	259	143	-39.2	-29.7	-19.2	11.9	-44.8
25 - 34	189	115	123	89	211	214	37	24	160	111	-39.2	-27.6	1.4	-35.1	-30.6
35 - 44	111	124	101	80	151	142	48	35	133	125	11.7	-20.8	- 6.0	-27.1	- 6.0
45 - 54	104	88	80	81	79	107	14	27	102	109	-15.4	1.2	35.4	0.0 a/	6.9
55 - 64	71	67	61	45	63	69	14	10	72	85	- 5.6	-26.2	9.5	-28.6	18.1
65 and over	70	70	40	34	57	54	14	19	93	78	0.0	-15.0	- 5.3	35.7	-16.1

a/ In estimating the change in the Martin group of counties, it was assumed there was no change in the female population aged 45 - 54 since the number of women in 1940 in the sample magisterial district appears to have been underenumerated.

1/ Since the sex of persons under 14 was not reported in the survey, males and females of this age were assumed to have the same rate of change.

Table 38.- Number of men per 100 women in the rural-farm population by age; April 1, 1940 and December 1, 1942; five groups of counties and five selected magisterial districts; Eastern Kentucky 1/

Age	All 33 counties		Carter group				Clinton group			
			Magisterial district #6		8 counties		Magisterial district #3		4 counties	
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942
Total	108	98	119	110	110	100	109	105	107	102
Under 15 2/	105	105	117	117	103	103	116	116	106	106
15 - 24	112	89	125	121	119	115	97	92	111	105
25 - 34	105	74	97	100	112	116	111	67	102	62
35 - 44	100	91	139	86	106	66	94	110	96	112
45 - 54	109	96	116	99	107	91	106	90	108	91
55 - 64	116	110	132	100	116	88	112	124	112	125
65 and over	126	132	127	127	131	131	145	150	124	115

Age	Leslie group				Martin group				Owsley group			
	Magisterial district #3		9 counties		Magisterial district #6		4 counties		Magisterial district #2		8 counties	
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942
Total	106	96	107	96	111	100	108	100	110	97	107	95
Under 15 2/	101	101	106	106	119	119	106	106	116	116	104	104
15 - 24	102	79	107	83	105	70	116	77	114	87	112	85
25 - 34	113	71	106	67	116	92	99	78	108	61	103	59
35 - 44	101	99	99	97	81	89	99	108	104	90	99	85
45 - 54	135	114	109	92	a/100	100	a/116	116	92	81	107	94
55 - 64	118	109	120	111	71	100	112	156	121	99	117	96
65 and over	132	144	122	135	93	90	130	126	99	119	126	152

a/ The number of women aged 45 - 54 in 1940 appears to have been underenumerated; the ratio of men to women existing in 1942 was assumed to have also applied in 1940.

1/ Based upon U. S. Census of Population for 1940 and survey for 1942.

2/ Since the sex of persons under 14 was not reported in the survey, the ratio of males to females under 15 in 1942 was assumed to be the same as in 1940.

Table 39.- Population by age and sex, U. S. Census April 1, 1940, and survey enumeration, December 1, 1942; five selected magisterial districts in five counties; Eastern Kentucky

Age	Number						Percent					
	Total		Men		Women		Total		Men		Women	
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942
Carter District #6												
Total	3030	2112	1646	1105	1384	1007	100.0	100.0	54.3	52.3	45.7	47.7
Under 15	1228	817	662	440	566	377	40.5	38.7	21.8	20.9	18.7	17.8
15 - 24	615	367	342	201	273	166	20.3	17.4	11.3	9.5	9.0	7.9
25 - 34	373	230	184	115	189	115	12.3	10.9	6.1	5.4	6.2	5.4
35 - 44	265	230	154	106	111	124	8.8	10.9	5.1	5.0	3.7	5.9
45 - 54	225	175	121	87	104	88	7.4	8.3	4.0	4.1	3.4	4.2
55 - 64	165	134	94	67	71	67	5.5	6.3	3.1	3.2	2.4	3.2
65 and over	159	159	89	89	70	70	5.2	7.5	2.9	4.2	2.3	3.3
Clinton District #3												
Total	1959	1595	1023	817	936	778	100.0	100.0	52.2	51.2	47.8	48.8
Under 15	748	689	402	370	346	319	38.2	43.2	20.5	23.2	17.7	20.0
15 - 24	364	249	179	119	185	130	18.6	15.6	9.1	7.5	9.4	8.2
25 - 34	259	149	136	60	123	89	13.2	9.4	7.0	3.2	6.3	5.6
35 - 44	196	168	95	88	101	80	10.0	10.5	4.8	5.5	5.2	5.0
45 - 54	165	154	85	73	80	81	8.4	9.7	4.3	4.6	4.1	5.1
55 - 64	129	101	68	56	61	45	6.6	6.3	3.5	3.5	3.1	2.8
65 and over	98	85	58	51	40	34	5.0	5.3	3.0	3.1	2.0	2.1
Leslie District #3												
Total	3723	3283	1912	1605	1811	1678	100.0	100.0	51.3	48.9	48.7	51.1
Under 15	1768	1596	887	802	881	794	47.5	48.6	23.8	24.4	23.7	24.2
15 - 24	746	533	377	235	369	298	20.0	16.3	10.1	7.2	9.9	9.1
25 - 34	450	366	239	152	211	214	12.1	11.1	6.4	4.6	5.7	6.5
35 - 44	304	283	153	141	151	142	8.2	8.6	4.1	4.3	4.1	4.3
45 - 54	186	229	107	122	79	107	5.0	7.0	2.9	3.7	2.1	3.3
55 - 64	137	144	74	75	63	69	3.7	4.4	2.0	2.3	1.7	2.1
65 and over	132	132	75	78	57	54	3.5	4.0	2.0	2.4	1.5	1.6
Martin District #6												
Total	739	653	389	326	350	327	100.0	100.0	52.6	49.9	47.4	50.1
Under 15	359	319	195	173	164	146	48.6	48.8	26.4	26.5	22.2	22.4
15 - 24	121	112	62	46	59	66	16.4	17.2	8.4	7.1	8.0	10.1
25 - 34	80	46	43	22	37	24	10.8	7.0	5.8	3.4	5.0	3.7
35 - 44	87	66	39	31	48	35	11.8	10.1	5.3	4.7	6.5	5.4
45 - 54	41	54	27	27	14	27	5.5	8.3	3.7	4.1	1.9	4.1
55 - 64	24	20	10	10	14	10	3.2	3.1	1.3	1.5	1.9	1.5
65 and over	27	36	13	17	14	19	3.7	5.5	1.7	2.6	1.9	2.9

(Continued)

Table 39.- (Continued)

Age	Number						Percent					
	Total		Men		Women		Total		Men		Women	
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942
Owsley District #2												
Total	2718	1917	1427	943	1291	974	100.0	100.0	52.5	49.2	47.5	50.8
Under 15	1018	697	546	374	472	323	37.5	36.4	20.1	19.5	17.4	16.8
15 - 24	555	267	296	124	259	143	20.4	13.9	10.9	6.5	9.5	7.5
25 - 34	333	179	173	68	160	111	12.3	9.3	6.4	3.5	5.9	5.8
35 - 44	272	237	139	112	133	125	10.0	12.4	5.1	5.8	4.9	6.5
45 - 54	196	197	94	88	102	109	7.2	10.3	3.5	4.6	3.8	5.7
55 - 64	159	169	87	84	72	85	5.8	8.8	3.2	4.4	2.6	4.4
65 and over	185	171	92	93	93	78	6.8	8.9	3.3	4.9	3.4	4.1

Table 40.- Rural farm population by age and sex; U. S. Census for April 1, 1940 and survey estimate for December 1, 1942; five groups of counties in Eastern Kentucky

Age	Number						Percent					
	Total		Men		Women		Total		Men		Women	
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942
All 33 counties (Eastern Kentucky exclusive of Bell, Harlan, Letcher)												
Total	449,139	364,519	233,049	180,533	216,090	183,986	100.0	100.0	51.8	49.5	48.2	50.5
Under 15	183,005	150,809	93,721	77,266	89,284	73,543	40.8	41.3	20.9	21.2	19.9	20.2
15 - 24	91,795	63,071	48,594	29,675	43,201	33,396	20.4	17.3	10.8	8.1	9.6	9.2
25 - 34	51,835	34,096	26,560	14,476	25,275	19,620	11.5	9.4	5.9	3.9	5.6	5.4
35 - 44	42,525	37,121	21,255	17,709	21,270	19,412	9.5	10.2	4.7	4.9	4.8	5.3
45 - 54	33,568	34,146	17,515	16,693	16,053	17,453	7.5	9.4	3.9	4.6	3.6	4.8
55 - 64	24,314	22,633	13,064	11,853	11,250	10,780	5.4	6.2	2.9	3.3	2.5	2.9
65 & over	22,097	22,643	12,340	12,861	9,757	9,782	4.9	6.2	2.7	3.5	2.2	2.7
Carter group: 8 counties												
Total	85,270	60,286	44,728	30,209	40,542	30,077	100.0	100.0	52.4	50.1	47.6	49.9
Under 15	32,312	21,487	16,398	10,894	15,914	10,593	38.0	35.6	19.3	18.0	18.7	17.6
15 - 24	17,334	10,351	9,421	5,540	7,913	4,811	20.3	17.2	11.0	9.2	9.3	8.0
25 - 34	10,013	6,178	5,302	3,314	4,711	2,864	11.7	10.2	6.2	5.5	5.5	4.8
35 - 44	8,074	7,232	4,165	2,866	3,909	4,366	9.5	12.0	4.9	4.8	4.6	7.2
45 - 54	6,864	5,356	3,552	2,554	3,312	2,802	8.0	8.9	4.1	4.2	3.9	4.6
55 - 64	5,496	4,505	2,958	2,109	2,538	2,396	6.4	7.5	3.4	3.5	3.0	4.0
65 & over	5,177	5,177	2,932	2,932	2,245	2,245	6.1	8.6	3.5	4.9	2.6	3.7

(Continued)

Table 40.- (Continued)

Age	Number						Percent					
	Total		Man		Women		Total		Man		Women	
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942
Clinton group: 4 counties												
Total	59,450	48,700	30,716	24,579	28,734	24,121	100.0	100.0	51.7	50.6	48.3	49.4
Under 15	22,736	20,940	11,685	10,761	11,051	10,179	38.3	43.0	19.7	22.1	18.6	20.9
15 - 24	11,910	8,135	6,276	4,174	5,634	3,961	20.0	16.7	10.5	8.6	9.5	8.1
25 - 34	6,993	4,063	3,533	1,558	3,460	2,505	11.8	8.3	6.0	3.2	5.8	5.1
35 - 44	5,836	5,005	2,855	2,644	2,981	2,361	9.8	10.3	4.8	5.5	5.0	4.8
45 - 54	4,920	4,589	2,549	2,190	2,371	2,399	8.3	9.4	4.3	4.5	4.0	4.9
55 - 64	3,591	2,813	1,898	1,564	1,693	1,249	6.0	5.8	3.2	3.2	2.8	2.6
65 and over	3,464	3,155	1,920	1,688	1,544	1,467	5.8	6.5	3.2	3.5	2.6	3.0
Leslie group: 9 counties												
Total	144,893	129,117	74,880	63,239	70,013	65,878	100.0	100.0	51.7	48.9	48.3	51.1
Under 15	62,289	56,247	32,015	28,905	30,274	27,342	43.0	43.5	22.1	22.3	20.9	21.2
15 - 24	29,719	21,168	15,379	9,581	14,340	11,587	20.5	16.4	10.6	7.4	9.9	9.0
25 - 34	16,691	13,675	8,597	5,468	8,094	8,207	11.5	10.6	5.9	4.2	5.6	6.4
35 - 44	13,320	12,402	6,621	6,105	6,699	6,297	9.2	9.6	4.6	4.7	4.6	4.9
45 - 54	9,959	12,374	5,189	5,915	4,770	6,459	6.9	9.6	3.6	4.6	3.3	5.0
55 - 64	6,833	7,180	3,730	3,782	3,103	3,398	4.7	5.6	2.6	3.0	2.1	2.6
65 and over	6,082	6,071	3,349	3,483	2,733	2,588	4.2	4.7	2.3	2.7	1.9	2.0

(Continued)

Table 40.- (Continued)

Age	Number						Percent					
	Total		Man		Women		Total		Man		Women	
	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942	1940	1942
Martin group: 4 counties												
Total	83,144	72,614	43,244	36,357	39,900	36,257	100.0	100.0	52.0	49.8	48.0	50.2
Under 15	35,058	31,167	18,018	16,017	17,040	15.150	42.2	43.0	21.7	22.1	20.5	20.9
15 - 24	17,496	16,030	9,411	6,983	8,085	9,047	21.0	22.1	11.3	9.6	9.7	12.5
25 - 34	9,260	5,377	4,614	2,362	4,646	3,015	11.2	7.4	5.6	3.2	5.6	4.2
35 - 44	7,852	5,982	3,909	3,108	3,943	2,874	9.4	8.2	4.7	4.2	4.7	4.0
45 - 54	6,038	6,038	3,236	3,236	2,802	2,802	7.3	8.3	3.9	4.4	3.4	3.9
55 - 64	4,026	3,482	2,124	2,124	1,902	1,358	4.8	4.8	2.5	2.9	2.3	1.9
65 and over	3,414	4,538	1,932	2,527	1,482	2,011	4.1	6.2	2.3	3.4	1.8	2.8
Owsley group: 8 counties												
Total	76,382	53,802	39,481	26,149	36,901	27,653	100.0	100.0	51.7	48.7	48.3	51.3
Under 15	30,610	20,968	15,605	10,689	15,005	10,279	40.1	39.0	20.5	19.9	19.6	19.1
15 - 24	15,336	7,387	8,107	3,397	7,229	3,990	20.1	13.7	10.6	6.3	9.5	7.4
25 - 34	8,878	4,803	4,514	1,774	4,364	3,029	11.6	8.9	5.9	3.3	5.7	5.6
35 - 44	7,443	6,500	3,705	2,986	3,738	3,514	9.7	12.1	4.8	5.6	4.9	6.5
45 - 54	5,787	5,789	2,989	2,798	2,798	2,991	7.6	10.8	3.9	5.2	3.7	5.6
55 - 64	4,368	4,653	2,354	2,274	2,014	2,379	5.7	8.6	3.1	4.2	2.6	4.4
65 & over	3,960	3,702	2,207	2,231	1,753	1,471	5.2	6.9	2.9	4.2	2.3	2.7

Table 41.- War unit conversion factors for essential farm enterprises 1/

Farm enterprise	Unit value per acre or head
Burley tobacco	2.00
Corn	.20
Castor beans	.33
Hemp	.20
Small grain harvested	.07
Alfalfa hay	.17
Soybean hay	.08
Other hay	.07
Truck crops (except garden)	1.00
Irish potatoes and sweetpotatoes	.50
Milk cows	1.00
Beef cows	.08
Other cattle in farm herd	.08
Stocker cattle	.01
Sows (per litter)	.30
Other hogs	.05
Sheep (ewes)	.03
Hens, per 100	1.30
Chickens raised for flock replacement or meat, per 100	.20
Turkeys, per 100	2.50

1/ Based upon Selective Service System releases.

Table 42.- Average number of war units per farm family, by war unit groups; selected magisterial districts in 5 counties; Eastern Kentucky, 1942 1/

County and District	Average war units per family		
	Group I Less than 8 war units	Group II 8-11.9 war units	Group III 12 or more war units
Total, all districts	3.5	9.5	14.1
Carter #6	3.9	9.1	14.6
Clinton #3	3.2	9.8	15.4
Leslie #3	3.5	9.1	13.9
Martin #6	3.0	10.3	12.1
Owsley #2	3.8	9.5	14.1

1/ War unit group II includes 80 percent of the 359 farm families interviewed; group II includes 12 percent and group III includes 8 percent.

Table 43.- Estimated average production per family of 6 products sold, by availability of family head for war work; 288 farms with less than 8 war units, selected magisterial districts in five counties; Eastern Kentucky, 1942 1/

Item a/	All families		Families with heads available		Families with heads not available	
	Average all families	Average families reporting	Average all families	Average families reporting	Average all families	Average families reoprting
All districts						
Tobacco (lbs.)	113	238	112	220	119	258
Beef (lbs.)	49	1,159	81	1,547	22	491
Veal (lbs.)	78	178	71	168	84	211
Eggs (doz.)	45	103	56	111	36	81
Poultry (lbs.)	40	184	38	139	40	188
Butterfat (lbs.)	8	74	5	49	10	65
Carter #6						
Tobacco (lbs.)	193	510	230	440	183	547
Beef (lbs.)	85	1,300	130	2,500	70	1,000
Veal (lbs.)	123	225	102	195	129	180
Eggs (doz.)	85	113	102	139	79	104
Poultry (lbs.)	31	157	16	107	34	178
Butterfat (lbs.)	25	136	11	100	31	142
Clinton #4						
Tobacco (lbs.)	187	450	160	350	217	590
Beef (lbs.)	95	2,000	160	3,500	25	500
Veal (lbs.)	69	150	68	150	70	300
Eggs (doz.)	59	96	82	121	32	60
Poultry (lbs.)	87	220	95	235	78	194
Butterfat (lbs.)	11	161	3	42	22	222
Leslie #3						
Tobacco (lbs.)	0	0	0	0	0	0
Beef (lbs.)	0	0	0	0	0	0
Veal (lbs.)	72	180	57	180	87	165
Eggs (doz.)	20	140	32	140	9	90
Poultry (lbs.)	37	190	33	107	37	186
Butterfat (lbs.)	b/	56	b/	56	0	0
Martin #5						
Tobacco (lbs.)	0	0	0	0	0	0
Beef (lbs.)	75	2,250	155	2,250	0	0
Veal (lbs.)	44	150	51	150	34	300
Eggs (doz.)	36	66	35	59	37	74
Poultry (lbs.)	24	128	26	116	25	136
Butterfat (lbs.)	0	0	0	0	0	0
Owsley #2						
Tobacco (lbs.)	320	510	300	570	340	470
Beef (lbs.)	35	1,250	30	1,000	40	1,500
Veal (lbs.)	93	180	90	150	102	150
Eggs (doz.)	50	71	55	79	46	65
Poultry (lbs.)	33	235	33	178	37	260
Butterfat (lbs.)	11	50	11	47	11	50

a/ Weights used in converting numbers of livestock sold to pounds are as follows: beef cattle, 500 lbs. each; veal calves, 150 lbs. each; chickens sold 4.13 lbs. each. b/ Less than 2 lbs. 1/ Sales of other than the six commodities were not important or were made mostly to other farms.

Table 44.- Distribution of families by availability of family head and by net farm income to family, for 189 farm operators with less than 8 war units; selected magisterial districts in five counties, Eastern Kentucky, 1942 1/

Income	Availability of family heads					
	All families		Heads available		Heads not available	
	Number	Percent	Number	Percent	Number	Percent
Less than $0	69	36	37	50	32	28
$0 to $50	38	20	12	16	26	22
$50 to $100	24	13	5	7	19	17
$100 to $150	17	10	7	10	10	9
$150 and over	41	21	13	17	28	24
Total	189	100	74	100	115	100

1/ Croppers and residents not included.

Table 45.- Seasonal distribution of usual man hours required per acre or head for crop and livestock enterprises in Eastern Kentucky. 1/

	Burley tobacco	Corn topped foddered and blocked	Corn harvested from standing stack	Sorghum for syrup	Wheat	Small grain hay	Lespedeza hay	Clover, timothy, alone or mixed	Other tame hay	Sowing grasses and legumes	Soybean hay	Hemp seeds	Irish potatoes	Truck garden	Milk cows	Other cattle (beef)	Sheep	Sows and gilts and their produce	Hens per 100	Work stock
Jan. 1-15															6.0	1.0	.5	3.0	7.3	1.6
16-31															6.0	1.0	.5	3.0	7.2	1.6
Feb. 1-15	3.4														5.5	1.0	.6	3.0	9.1	1.6
16-28	6.7					0.8				.2					5.6	1.0	.6	3.0	9.1	1.6
Mar. 1-15	6.4					4.5				.3				0.9	5.3	1.0	.6	3.7	6.7	2.0
16-31	4.9	2.4	2.4	5.3		2.1				.3		1.8		10.4	5.4	1.0	.6	3.7	6.6	2.0
Apr. 1-15	2.7	4.4	4.4	6.4		2.6				.2		3.5		12.3	5.2	.8	.1	3.2	7.5	2.1
16-30	4.8	6.4	6.4	3.5							2.2	6.1		22.6	5.3	.7	.1	3.1	7.5	2.1
May 1-15	10.6	5.0	5.0	3.4							5.9	6.4		24.6	4.9	.5	.2	3.2	8.5	1.8
16-31	32.3	11.5	11.5	6.4				1.6			2.8	3.7		25.6	5.0	.5	.2	3.1	8.5	1.7
June 1-15	20.4	19.4	19.4	8.3	3.9			7.7			4.1	13.7		21.9	4.9	.5	.2	2.9	8.0	1.6
16-30	18.2	13.5	13.5	8.5	7.1	13.0		.6	3.0			6.4		18.9	5.0	.5	.2	3.0	8.0	1.6
July 1-15	19.2	7.9	7.9	8.3	3.0	1.0			4.0		.6	.4		31.1	4.6	.5	.1	2.6	6.3	1.2
16-31	1.5			4.9	3.0			5.2						14.9	4.7	.5	.1	2.6	6.2	1.2
Aug. 1-15	9.4							2.9			1.8	2.8		13.9	4.2	.2	.1	2.6	7.3	1.2
16-31	46.0						4.2		2.5		11.8	8.6		13.1	4.2	.3	.1	2.6	7.2	1.2
Sept. 1-15	46.3	6.7			1.8		8.2		4.5		8.3	.6		1.8	4.4	.2	.1	3.2	6.3	1.8
16-30	2.3	8.8		125.0	3.3		2.6								4.5	.3	.1	3.1	6.2	1.8
Oct. 1-15					.9							9.6			4.6	.5	.1	3.7	6.3	1.5
16-31	34.3	1.3	1.0									18.2			4.7	.5	.1	3.7	6.2	1.5
Nov. 1-15	63.8	8.4	5.4									10.2			4.9	.5	--	3.0	9.0	1.8
16-30	24.7	4.8	3.6												4.9	.5	--	3.0	9.0	1.7
Dec. 1-15	15.7														5.1	.7	.4	3.0	8.0	1.9
16-31	11.4														5.1	.8	.4	3.0	8.0	1.9
Total hours	385.0	100.5	80.5	180.0	23.0	24.0	15.0	18.0	14.0	1.0	37.5	92.0		212.0	120.0	15.0	6.0	74.0	180.0	

1/ These data were supplied by E. J. Nesius and Max M. Tharp of the Kentucky Agricultural Experiment Station.

Table 46.- Male heads under 60 by present major occupation; selected magisterial districts in five counties; Eastern Kentucky, December 1, 1942

County and district	Total		Farm operator	Farm laborer, paid or unpaid	Nonfarm	All other
	Number	Percent	Percent	Percent	Percent	Percent
Carter #6	302	100.0	59.6	4.3	35.4	0.7
Clinton #3	257	100.0	66.6	3.5	23.7	6.2
Leslie #3	453	100.0	67.6	1.3	30.7	0.4
Martin #6	88	100.0	48.9	6.8	34.1	10.2
Owsley #2	274	100.0	79.2	7.6	11.3	1.8

Table 47.- Distribution of family heads in war unit Group I by tenure and availability for war work; selected magisterial districts in five counties; Eastern Kentucky, December 1, 1942

Availability of family heads for war work	All families		Tenure			
			Total	Operator	Cropper	Country resident
	Number	Percent	Percent	Percent	Percent	Percent
Carter District #6						
Available	18	23	100	55	28	17
Not available-handicapped	20	26	100	75	10	15
Not available-have war job	39	51	100	72	10	18
Total	77	100	100	69	14	17
Clinton District #3						
Available	23	56	100	30	39	31
Not available-handicapped	13	32	100	69	15	16
Not available-have war job	5	12	100	100	0	0
Total	41	100	100	51	27	22
Leslie District #3						
Available	16	46	100	81	19	0
Not available-handicapped	7	20	100	71	29	0
Not available-have war job	12	34	100	50	33	17
Total	35	100	100	68	26	6
Martin District #6						
Available	29	49	100	69	17	14
Not available-handicapped	16	27	100	75	0	25
Not available-have war job	14	24	100	28	36	36
Total	59	100	100	61	17	22
Owsley District #2						
Available	36	47	100	67	28	5
Not available-handicapped	31	41	100	87	3	10
Not available-have war job	9	12	100	78	22	0
Total	76	100	100	76	17	7

Table 48.- Man-equivalent units by age and sex groups for farm and industrial work

Age and sex groups	Man-equivalent units	
	For farm work	For industrial work
Men, 16 to 59, available (excluding imminent Selective Service inductees)	1.0	1.0
Women, 16 to 49, available (excluding women with children under 10)	0.6	1.0
Boys, 13 to 15, available	0.167 1/	0.0 2/
Girls, 13 to 15 available	0.133 1/	0.0 2/
Boys, 10 to 12, available	0.067 1/	0.0 2/

1/ Children under 16 were considered available for only four months of the year. For these months the man equivalents for boys 13 to 15 were calculated at 0.5 man equivalent, for boys 10 to 12 at 0.4, and for girls 13 to 15 at 0.2. To obtain the number of hours of labor available per half month for farm work the man equivalent factors were multiplied by the percentage of work days suitable for field work, and then by the number of hours per work day. In November, December, January and February the farm work days were calculated at 8 hours; for March, April, September and October at 10 hours; and for May, June, July and August at 12 hours per day.

2/ Children under 16 were not considered available for industrial work.

Table 49.- Estimated 1/ number of available 2/ workers aged 15-59 in the rural-farm population by sex and family status; 33 counties; Eastern Kentucky, December 1, 1942

Family status and size of estimate		Total : 33 counties	Carter Group : 8 counties	Clinton Group : 4 counties	Leslie Group : 9 counties	Martin Group : 4 counties	Owsley Group : 8 counties
Male and female							
Total:	Low	63,147	8,864	10,175	24,182	10,150	9,776
	High	98,182	15,935	15,244	32,483	18,619	15,901
Male							
Total:	Low	46,661	6,553	7,738	17,434	7,622	7,314
	High	56,324	8,733	9,214	18,793	10,928	8,656
Heads of households	Low	27,788	3,069	4,521	10,782	4,576	4,840
	High	31,560	3,609	5,504	11,309	5,470	5,668
Other men	Low	18,873	3,484	3,217	6,652	3,046	2,474
	High	24,764	5,124	3,710	7,484	5,458	2,988
Female							
Total:	Low	16,486	2,311	2,437	6,748	2,528	2,462
	High	41,858	7,202	6,030	13,690	7,691	7,245
Heads, no children under 10:	Low	0	0	0	0	0	0
	High	1,954	598	340	382	436	198
Wives, no children under 10:	Low	0	0	0	0	0	0
	High	16,788	2,909	2,775	4,908	2,309	3,887
Other women	Low	16,486	2,311	2,437	6,748	2,528	2,462
	High	23,116	3,695	2,915	8,400	4,946	3,160

1/ Estimates were computed by extension of ratios for five selected magisterial districts to the five respective groups of counties; estimates not rounded in this table.

2/ Available in the sense that production for war could be greater at different work; low estimates are based upon the proportions of persons in the magisterial districts for whom there were no reported obstacles to m... high estimates are based upon proportions reported available at other than present work.

Table 50.- Percent of male heads and other males and females, other than household heads and wives, aged 15 - 59 and available for other than present work if reported obstacles could be overcome; selected magisterial districts in five counties; Eastern Kentucky, December 1, 1942 1/

County and district	Male heads			Other males			Women other than household heads and wives		
	Total		Available	Total		Available	Total		Available
	Number	Percent	Percent	Number	Percent	Percent	Number	Percent	Percent
Carter #6	302	100.0	40.1	221	100.0	77.8	159	100.0	77.4
Clinton #3	257	100.0	73.9	144	100.0	88.9	130	100.0	79.2
Leslie #3	453	100.0	60.0	247	100.0	72.9	256	100.0	77.3
Martin #6	88	100.0	48.9	50	100.0	86.0	53	100.0	84.9
Owsley #2	274	100.0	72.6	138	100.0	76.1	146	100.0	77.4

1/ The ratios in this table were used in preparing the high estimate of available workers.

Table 51.- Percent of available 1/ male heads, aged 15-59, by farm ownership and size of household; selected magisterial districts in five counties; Eastern Kentucky, December 1, 1942

County and district	Total Number	Farm owners 2/ with households of				Other than farm owners 2/ with households of			
		Total		1-4 persons	5 or more persons	Total		1-4 persons	5 or more persons
		Number	Percent	Percent	Percent	Number	Percent	Percent	Percent
Carter #6	103	39	100.0	43.6	56.4	64	100.0	48.4	51.6
Clinton #3	156	50	100.0	60.0	40.0	106	100.0	55.6	44.4
Leslie #3	259	72	100.0	31.9	68.1	187	100.0	36.7	63.3
Martin #6	36	9	100.0	a/	a/	27	100.0	22.2	77.8
Owsley #2	170	911	100.0	58.2	41.8	79	100.0	48.1	51.9

a/ Percentage not computed on base of fewer than 10 cases.

1/ Based upon low estimate of availability: i.e. heads for whom there were no reported obstacles to moving.

2/ Farm owners were those heads whose present major occupation was operating a farm which they owned; the data do not include all heads who owned land.

Table 52.- Males and females under 60, other than heads of households, classified as available for other than their present work if reported obstacles could be overcome, by age groups; five selected magisterial districts in five counties; Eastern Kentucky, December 1, 1942

County and district	Total		15	16-17	18-19	20-44	45-59
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Males							
Carter #6	172	100.0	11.6	35.6	26.7	24.4	1.7
Clinton #3	128	100.0	11.7	29.7	16.4	40.6	1.6
Leslie #3	180	100.0	12.2	30.6	37.2	19.4	0.6
Martin #6	43	100.0	20.9	27.9	20.9	30.3	0.0
Owsley #2	105	100.0	13.3	41.0	17.1	27.6	1.0
Females							
Carter #6	123	100.0	10.6	36.6	20.3	31.7	0.8
Clinton #3	103	100.0	6.8	22.3	31.1	33.0	6.8
Leslie #3	198	100.0	10.1	33.8	26.8	29.3	0.0
Martin #6	45	100.0	8.9	46.7	22.2	20.0	2.2
Owsley #2	113	100.0	15.9	36.3	23.0	24.8	0.0

Note: This table used in conjunction with the high estimate of available workers.